DOCUMENT RESUME

ED 241 916 CS 007 555

AUTHOR Harrison, David; Little, Barbara
TITLE Assessing English Skills: Reading. A Resource Book for Adult Basic Education.
INSTITUTION British Columbia Dept. of Education, Victoria. Div. of Continuing Education.
REPORT NO ISBN-0-7726-0040-6
PUB DATE 84
NOTE 97p.
AVAILABLE FROM Publication Services Branch, Ministry of Education, 878 Viewfield Rd., Victoria, British Columbia V9A 4V1 ($2.00 plus 10% shipping and handling).
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052) -- Books (010)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Adult Basic Education; Content Area Reading; Readability; *Reading Ability; Reading Comprehension; *Reading Diagnosis; Reading Interests; Reading Skills; *Reading Tests; Resource Materials; Self Evaluation (Individuals); *Standardized Tests; Student Attitudes; Study Skills; Test Construction; Test Reviews

ABSTRACT

Covering the most important aspects of assessing adult basic readers, this collection of articles is introduced by a discussion of the purpose of resource books for adult education. The first article then examines the rationale for assessing reading ability and stresses the importance of purpose and design in assessment. The second article reviews problems in defining reading and establishing what aspects of reading may be measured while the third provides a rationale and a number of practical examples for assessing attitudes and interests. Similarly, the fourth article presents the background and sample resources for assessing content area reading and study skills. The fifth article focuses on comprehension, dealing separately with standardized tests, informal approaches, and the cloze procedure, and the sixth article provides two measures for rapidly estimating test material readabliity and offers suggestions for making qualitative comparisons of books' readability. The collection contains numerous examples of various reading assessment measures, and concludes with a brief glossary of terms. (Author/MM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED241916

ASSESSING ENGLISH SKILLS: READING

A RESOURCE BOOK FOR ADULT BASIC EDUCATION

Continuing Education Division
Ministry of Education
Victoria, B.C.

1984

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Shell Harvey

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CS 007 555
CS 007 555

Canadian Cataloguing in Publication Data

Harrison, David, 1934-
Assessing English skills : reading

Writers: David Harrison, Barbara Little ; project editor, Alan Dawe. Cf. Acknowledgments.
ISBN 0-7726-0040-6

1. Reading (Adult education) - Ability testing. I. Little, Barbara. II. Dawe, Alan, 1925- . III. British Columbia. Division of Continuing Education. IV. Title.

LC5225.R4H37 1984 428.4'007'15 C84-092101-2

Copies of this publication can be ordered from:

Publication Services Branch
Ministry of Education
878 Viewfield Road
Victoria, B.C. V9A 4V1

Telephone: 387-1411 Cost: $2.00

Copyright 1984. Ministry of Education, Province of British Columbia, Canada.

CONTENTS

	Page
List of Examples	v
The Plan of This Book	vii
Acknowledgments	ix
A Perspective on Assessment	1
1. Why Assess Reading Ability?	5
2. What May Be Measured in Reading?	11
3. Assessing Attitudes and Interests	21
4. Assessing Content Area Reading and Study Skills	43
5. Ways to Assess Comprehension	57
Standardized Tests	57
Informal Approaches	62
Cloze Procedure	73
6. The Readability of Text	89
Glossary	93

LIST OF EXAMPLES

Chapter	Example	Title	Page
1	1	Reading Needs of Adults in Various Social Roles	7
2	1	Learning Objectives for Reading Improvement	19
3	1	Mikulecky Behavioral Reading Attitude Measure	23
	2	Personal-Social Interest Inventory	26
	3	Vocational Interest Inventory	26
	4	General Interest Inventory	27
	5	Interest Checklist	29
	6	Reading Self-Assessment	33
4	1	Learning Objectives for Assessment and Instruction	45
	2	Study Skills Assessment	47
	3	Vocabulary Assessment	49
	4	Biology Word Puzzle	52
	5	Comprehension Assessment	54
5	1	The Try-Out	64
	2	The Group Reading Inventory	65
	3	The Individual Reading Inventory (IRI)	66
	4	Twenty Minutes with a Newspaper	70
	5	Mathematics Cloze Test	78
	6	Science Cloze Test	80
	7	General Education Cloze Test	82
6	1	The Raygor Readability Estimate	91
	2	The Gunning-Fog Index (Simplified)	92

THE PLAN OF THIS BOOK

The introductory article in this book, "Perspective on Assessment," provides the instructor with the background thinking and purpose of the *Assessing English Skills* resource books for adult basic education.

Six articles on specific aspects of assessing reading ability then follow.

Article 1 examines the question of why a person's reading ability should be assessed and emphasizes the importance of purpose and design in assessment.

Article 2 reviews the problems of defining reading and of establishing what aspects of reading may be measured.

Article 3 provides a rationale, and a number of practical examples, for assessing attitudes and interests.

Similarly, Article 4 provides the background and sample resources for assessing content area reading and study skills.

Article 5 focusses on comprehension, dealing separately with standardized tests, informal approaches, and the cloze procedure.

Article 6 provides two measures for rapidly estimating the "readability" of the test material and, in addition, offers suggestions for looking at qualitative aspects of what makes one book more readable than another.

The book concludes with a brief glossary of terms.

ACKNOWLEDGMENTS

The Ministry of Education gratefully acknowledges the co-operation of Fraser Valley College in administering the project and the contributions of the following people:

Writers

David Harris, Ministry of Education
Barbara Little, Vancouver Community College

Project Editor

Alan Dawe

Reviewers

Jan Benge, School District No. 41, Burnaby
Mae Burrows, Douglas College
Nick Gammer, Okanagan College
Ted James, Douglas College
Marlyn Sparks, School District No. 36, Surrey
Beryl Tonkin, Camosun College
Ken Wiens, East Kootenay College

A PERSPECTIVE ON ASSESSMENT

When those of us charged with compiling *Assessing English Skills* first met to discuss the project, we soon became aware that we had a multitude of complex issues to deal with. We realized, too, that organizing our material in a rigidly systematic way might prove to be a difficult task, even an impossible one. Gradually, it became clear that the plan of the book should be informal rather than formal; and the point of view more practical, than theoretic.

Assessing English Skills is one of a short series of ABE resource books for instructors. Each is a collection of articles on what seem to be the most important aspects of a particular communication skill. The authors hope that anyone who uses the books will come away with a good overview of its subject, and will pick up many useful hints for approaching the testing of English skills in a rational way.

The *Assessing English Skills* resource books were written partly in response to the request of numerous instructors in Adult Basic Education (ABE) for some assessment guidelines. Those familiar with other Ministry publications will realize that *Assessing English Skills* directly relates to the *ABE English and Communications Curriculum Guide*. It also supports the learning materials already in the field, such as the *Communication 3* and *VAST 4 English* workbooks and related resources.

The first two books of the Assessing English Skills series focus on the two aspects of the English curriculum — reading and writing — that are most frequently the subject of instruction and assessment. The most important of the authors' assumptions are discussed in the paragraphs that follow.

- The twin subjects of reading and writing are more than just closely related; they are, in a least one sense, inseparable. Although a good reader may not necessarily be a good writer (possibly because of a lack of practice in the writing art), good writers must have become critical readers of at least their own writing. Teachers of writing must consequently also be teachers of reading, and the assessment of writing cannot help but involve an assessment of one's ability to read, especially of the ability to read critically.
- There appears to be a realistic trend across most ABE programs towards the **informal** assessment of both reading and writing. In a survey of what is actually practiced in the field, there was little evidence that classroom instructors were using standardized tests of writing. Moreover, the use of standardized reading tests does not appear to be nearly as widespread (nor in as good repute) as it was even a decade ago. The two resource books, *Assessing English Skills: Writing* and *Assessing English Skills: Reading* describe various **informal** assessment approaches, and offer a number of specific examples and models that could be made use of by instructors whose basic approach to assessment is informal.

- It is possible that at least one group of potential readers may find these twin books disappointing. This is the group (assuming that it really does exist) that would like to be provided with **absolute** and well-differentiated guidelines for the assessment of reading and writing at all the various instructional levels, and would like these standards to be set down in an **authoritative** way, as if from on high. Though it might be possible to do this, it would not be possible to do it honestly, since the assessment of both reading and writing, though not entirely subjective, does have strong subjective elements. For this reason, our aim has been to set down possibilities for what **might** be done, not prescriptions for what **must** be done. This does not mean that the authors hold the view that there are no standards that can guide our efforts to evaluate students. (Most of us for example, would defend the notion that *Moby Dick* is **absolutely** a better book than *Jaws*). But we do feel it is unrealistic to pretend to be absolute about standards.

- On the theme of subjectivity, something probably needs to be said about the manner in which personal idiosyncrasies, firm convictions, natural biases and individual literary tastes can enter into — and perhaps distort — judgment in any type of assessment, particularly the assessment of someone else's writing. We do not offer any sure-fire emotional antibiotic to be universally prescribed to cure grossly subjective appraisals, though we can bring the dangers of this complaint to those who are in danger of being unwary victims of it. We also recognize that most institutions, English departments, and other groups of instructors would consciously avoid setting up assessment situations in which one instructor's evaluation might be set off against another's. Such situations, in the end, only confuse students and make them cynical, while removing the likelihood that anything profitable will be taught through the assessment process.

- A curious irony dominated our experience while we were writing these resource books. Although the primary mission was to put together resources for **testing**, we found ourselves returning time and time again to matters related to **teaching**. Doubtless this came about because of a belief that in any healthy educational system, instruction should always have supremacy over testing and grading. Whenever possible, testing must be at the service of teaching, and this seems of special importance when adult students are involved. Like younger students, adults do demand from time to time an answer to the question, "How am I doing?" But unless the assessment of adult students is a follow-up to appropriate and effective instruction, the testing is likely to lead to discouragement rather than inspiration. Adult students, then, are unlikely to benefit from either instruction or evaluation if they feel they are being personally intimidated or attacked. Indeed for many adult students, especially those who suffer from hurtful memories of past failures in even the most benign forms of testing, any assessment evaluation or 'quiz' is likely to pose a threat.

- The *Assessing English Skills* resource books are addressed to instructors of a particular group of adult students — those who, on the one hand, have attained the upper levels of what is generally referred to as "basic literacy", and those who have achieved something like the equivalent of high school completion. Perhaps these rough parameters can better be defined in another way. At one end of the spectrum are the students who could successfully cope with the reading and writing tasks of an ABE/BTSD Level 3 or Grade 10 preparation program; at the other end, are students capable of dealing with the reading and writing requirements of first year courses at a community college, university or institute of technology.

- In summary, while *Assessing English Skills* will not attempt to set out a system of absolute standards for assessing reading and writing, the articles are more than a loose collection of generalizations. Whenever possible, we have tried to be specific — offering suggestions, describing marking strategies, providing factual information, and listing useful resources. We also hope that a tone of honest pragmatism has prevailed throughout these books, and that every article clearly supports the proposition that all students — and especially all adult students — have the right to be tested in a fair, judicious and humane way.

1. WHY ASSESS READING ABILITY?

Few instructors would be comfortable with the idea that the sole purpose of reading assessment is to obtain marks or grades. Rather, many teachers know from experience that reading tests can provide them with information that allows them to shape learning plans for their students. In order to gather information from reading tests effectively and efficiently, however, it is helpful to have a **specific** purpose in mind. The article examines in some detail, and especially as they apply to the assessment of reading ability within an ABE program, four such reasons for testing, namely

- assessment of the student's reading ability and needs;
- placement of the student in an appropriate learning context;
- assessment of the student's progress;
- evaluation of the reading program.

Having determined the specific purpose for a reading assessment, the instructor can move more confidently into the business of selecting the actual method of assessment from such possibilities as individual or group tests, interviews, trial lessons, or self-analysis on the part of each student.

Assessment of the Student's Reading Ability and Needs

The two key questions or decisions involved in the diagnosis of a student's reading ability and needs are

- what reading ability does the student already have?
- what reading ability does the student need to attain?

Leaving aside for the moment the problem of defining reading ability, one observes that the instructor is involved in gathering the data needed to bridge the gap between needs and abilities. It thus seems equally important to assess the ground at both ends of the needs/abilities bridge.

One way of assessing the reading ability that adults need to attain is to look at the various social roles of adults (e.g., worker, learner, family member, consumer, community member, citizen) and then to identify related objectives in reading. Example 1 illustrates these objectives in relation to social roles.

EXAMPLE 1:
READING NEEDS OF ADULTS IN VARIOUS SOCIAL ROLES

Reading for Work or Career/Vocational Education:

- Read resource materials relating to job search or career exploration.
- Locate and interpret information about work tasks; materials and equipment; methods, procedures and directions; operating manuals; and similar documents.
- Read forms, notes, letters, memos, and reports.
- Read and interpret charts, data tables, and graphs related to vocation.
- Acquire specialized vocabulary used in jobs or training.

Reading as Family Member and Consumer:

- Locate information in telephone directories/yellow pages, store directories, timetables, and maps.
- Interpret and evaluate advertising; locate information and understand key ideas in consumer guides, reports, and similar consumer education materials.
- Read manuals and diagrams relating to household appliances, equipment, and automobile care.
- Read and understand warranties; guarantees; sales and rental contracts; loan and credit applications; insurance provisions; resource materials concerning health and nutrition, travel, community services and resources, and entertainment.
- Help children and other family members to select appropriate reading materials for a home library.

Reading as a Community Member and Citizen:

- Read to answer questions; solve problems; understand developments and events outside the immediate environment.
- Read information about ways to gain access to government services, influence government policies, make representations, etc.
- Read and understand information and ideas relating to voting.
- Evaluate information and ideas from newspapers and magazines.
- Read newsletters, minutes of meetings, and other material relating to political or religious groups, clubs, unions, or other interest groups.

A key social role for adults in ABE classes is that of learner. Two particular aspects to reading needs evolve from this role: demonstration and access.

Does the student, for instance, have to demonstrate a particular reading skill at a pre-set standard in order to meet entrance standards for a course or program, meet progress standards in an instructional program, or meet course completion standards? (One would hope that such standards had been established with a valid purpose, but of course that may not be the case.)

In addition, does the student need to be able to read with a certain proficiency in order to gain access to learning materials, tasks, and activities in a course content area? It may be useful to assess the characteristics of the materials the student will encounter.

The first two key questions having been addressed, there should now be added a third:

> What does this person now need to know or do in order to attain the needed level of reading proficiency?

Placement of the Student in an Appropriate Learning Context

Given the current emphasis on individualized learning, decisions about the placement of students will probably not centre around questions of what class, level, or grade a student is to be assigned to. Rather, such decisions will probably address questions such as

> What is the appropriate range and sequence of learning tasks this person needs to be presented with in order to have the best opportunity to meet the learning objectives.

If some group or class learning activities are also envisaged, then a similarly purposeful question guiding the assessment might be

> What grouping of learners in this program might best help those people move along their own routes to success?

Most ABE instructors have found that there are times when learners can pick up an idea or a concept faster in a homogeneous group than on their own. Likewise, there are other times (as in real life?) when people of markedly different abilities can learn from one another.

Assessment of the Student's Progress

Progress is a relative term: it often begs the question of the goals towards which progress is to be measured. However, if one can presume for the moment that (a) goals are fairly clear, that (b) goals have been translated into certain objectives that reflect student needs, and that (c) opportunities occur for valid measurement, then decisions about the extent of progress may not be so hard to make.

In criterion-referenced testing (see Glossary), one looks for measures that will make it easy to compare performance to specific learning objectives. In norm-referenced or standardized tests, one looks for measures that make it possible to compare progress relative to some other group of individuals, either in the same class or in a similar learning environment somewhere else.

What follows the decision about how much or how little progress has been made, however, may not be as critical for students as are the answers to the following type of questions:

- Is there a need to provide more instruction?
- Is further practice all that is necessary to consolidate the student's knowledge in this area?
- Is a different instructional approach needed?
- Is there a need for materials that more appropriately match this student's interest and ability?
- Is there some indication that the student belongs in another group?

Evaluation of the Reading Program

In addition to providing information concerning the student's ability and needs, placement, and progress (as described above), reading tests can be used to provide information about the effectiveness of the reading program and to provide the ABE institution with important information.

Reading tests oriented towards evaluation of the **reading program** can be designed

- to find out the range of achievement of students in a class;
- to find out how many students in a class have mastered a specific skill;
- to compare the progress or achievement of one class with another;
- to evaluate the success of a method, technique, or set of instructional materials in helping students to learn;
- to evaluate the success of an instructor in attaining curriculum goals.

Reading tests can also be used to provide the ABE institution with evidence of

- student achievement;
- the teaching effectiveness of an instructor;
- the need for student aid or program funding;
- achievement that might be used in provincial or national assessments.

The key point is that the assessment measures used in the evaluation of programs, methods, materials, instructors, funding systems, or institutional goals should not be the same as the assessment measures used for the direct improvement of instruction. A different assessment design is needed, and incidentally — a bigger budget!

Why assess reading ability? The main purpose is to gather information that can be used in making decisions about student learning (i.e., about present ability in relation to short- and longer-term needs, about placement in appropriate contexts for learning, and about progress towards specified objectives). A secondary purpose for reading assessment may be to evaluate the effectiveness of instructors, programs, and institutions.

In assessment, as in instruction, we should be very clear about the specific purposes of action and should determine those purposes well in advance of the action and the critical decisions that follow.

Resources

Anderson, Beverly L., Richard J. Stiggins, and Suzanne B. Hiscox. *Guidelines for Selecting Basic Skills and Life Skills Tests*. Portland, Oregon: Northwest Regional Educational Laboratory, 1980.

British Columbia, Ministry of Education: Continuing Education Division. *Reading Development: A Resource Book for Adult Basic Education*. Victoria, B.C.: Queen's Printer, 1982.

Schreiner, Robert, ed. *Reading Tests and Teachers: A Practical Guide*. Newark, Del.: International Reading Association, 1979.

Venezky, Richard L. *Testing in Reading: Assessment and Instructional Decision Making*. Urbana, Ill.: National Council of Teachers of English, 1974.

2. WHAT MAY BE MEASURED IN READING?

What exactly do instructors need to know about the reading ability of a student, or, for that matter, about their **own** reading competence, and how this relates to living and learning? Just how much of this apparently desirable information is (a) already known, (b) might be discovered through some means **other than** testing, and (c) might be obtained, or at least estimated, on the basis of some test? Then again, what **are** the characteristics of a person's reading ability that may be measured, within a reasonable amount of time and with a minimum of effort, to form the basis of decisions about how to improve and maintain (or abandon?) reading?

In seeking answers to these key questions about the assessment of reading, there are some problems of definition that keep cropping up. Perhaps these bother reading specialists and researchers more than front-line instructors, but it is useful to clarify what constitutes "reading," "reading comprehension," "rate of reading," and "vocabulary knowledge" before doing any serious testing.

Models of the Reading Process Access

One immediate problem is that reading is a process, not a product. It is, moreover, a process that has been analysed in quite different ways over the years. Currently, theories about the process of reading (and hence about the measurable components of this process) generally fall into three groups. This division is still somewhat arbitrary; there are many "overlaps"; however, the general scheme provides a framework for discussion.

Bottom-Up Models

Incoming information from the senses (e.g., print symbols perceived by the eyes and transmitted to the brain) is processed in a series of discrete stages. The text is decoded and subjected to progressively higher-level and more complex processes — hence "bottom-up." These theories usually imply that reading can be broken down (or up) into sub-skills of varying complexity; the skills can be ordered into some kind of hierarchy that ascends from decoding, through literal comprehension, to inferential and then critical comprehension; each level of skill becomes a prerequisite or even a stimulus for the next higher level of processing.

In terms of measuring reading ability, bottom-up theories imply measurement of the sub-skills of reading such as those just mentioned. As reading has definable component skills, one should measure those skills and observe how the parts fit together into the whole. Accuracy of performance on each level of skills is important.

Top-Down Models

The reading process is driven or directed by the higher-level efforts of the brain to get a cognitive grasp of the information presented to it. The fluent reader is actively seeking meaning from print rather than reacting to a stimulus. This active reader brings certain expectations to the text, anticipates words and language structures, confirms predictions, and moves on.

People who prefer the top-down model would, therefore, be likely to measure a person's reading ability in terms of both the overall grasp of meaning and the strategies that the reader employs (such as hypothesizing, sampling, checking, and revising initial estimates at meaning). Accuracy of oral decoding and word recognition may be less important than the approach to reading.

Interactive Models

Understanding of a text is achieved through the simultaneous interaction of information from the reader and the text. **Reader variables** are considered to be especially important (i.e., the reader's previous experience of language, including vocabulary, syntax, and concepts of the subject matter). Together, these make up a "schema," or framework of understanding, that the brain can call upon in order to weave the new knowledge into that already known. **Text variables** are equally significant (i.e., complexity of expression, connotations and allusions, the type of prose — narrative, expository, etc. -- the logic of its organization, and the visual effect of charts, photographs, headings, and typeface).

The interactive model has some practical implications for measuring students' reading ability. First, it recognizes the complexity of factors affecting reading and suggests that we should be looking at as many of those factors as possible when we assess reading ability. Secondly, it suggests that we should take account of the characteristics of the text as well as those of the reader. Thirdly, it indicates that as we assess the readability of a book or passage, the base measures of sentence length and vocabulary difficulty should be considered along with other variables of style and presentation.

Thus there are two ways of grouping and understanding the characteristics of the reader: (a) what the reader does and thinks about in the process of actually reading, and (b) what the reader brings to the reading task in terms of previous experience with language, subject matter, and structure of the reading task itself (especially one's purpose for reading). Thus, reading comprehension involves **word** knowledge plus **world** knowledge.

Why bother with a model of the reading process? The primary benefit is that a rational model should make it easier to decide what one wants to measure, in what circumstances, and with what implications for learning.

The remaining part of this article examines those aspects of reading behavior that are commonly measured, whether by formal, standardized tests or by informal, teacher-made tests. Some difficulties of measurement and interpretation are reviewed, and specific suggestions for practical ways of assessing reading are given in Articles 3, 4, and 5 of this book.

Measurable Aspects of Reading

At the lowest, functional level of adult basic literacy, the skills that are generally seen as fundamental to reading and understanding are basic decoding ability, sight word recognition, word analysis, and some fluency in silent and oral reading. Suggestions, and a wide range of sample test items for this level, are contained in the *Adult Basic Literacy Assessment Kit* (B.C. Ministry of Education, 1981).

Beyond this level of functional literacy, adults need to call on a comprehensive array of skills, strategies, and approaches to reading. They include attitude, interest, setting of purpose, the many aspects of comprehension, management of new vocabulary, integration of new knowledge with what is already known, and the application of this new synthesis of understanding to problems and challenges of life around them. A comprehensive list of specific learning objectives in ABE reading is contained in *Reading Development* and in the *ABE English and Communications Curriculum Guide* (B.C. Ministry of Education, 1982). An extract from that list is produced as Example 1 at the end of this article.

In seeking measures of how well or badly people do in these aspects of reading, one can set up any number of formal or informal test situations. Each may provide **some** information, but frequently success in the endeavor will be dogged by two inexorable realities:

- Tests will almost always be artificial, staged simulations of the real-life reading situations that we seldom have the opportunity to observe.
- Comprehension itself is an invisible phenomenon.

These limitations, however, have had very little effect on the efforts of educators to observe and measure the act of reading. Presumably the efforts have some use; otherwise we would have given up long ago.

The most commonly used measures in informal and formal testing are (a) reading vocabulary, (b) reading comprehension, and (c) reading rate. Of increasing importance in recent years, however, are measures of (d) reading attitude and interest, (e) study or learning skills, and (f) metacognition (awareness of one's own distinctive approach to acquiring and understanding knowledge).

The first three topics are reviewed below; reading attitude and interest are the subject of Article 3; and content area reading and study skills are the focus of Article 4.

Measuring Vocabulary

Reading comprehension has consistently been shown to be strongly related to word knowledge. Consequently, nine out of ten standardized tests, and many more informal assessments of silent reading ability, include a separate vocabulary sub-test. Likewise, the readability levels of texts are commonly based on some indicator of vocabulary difficulty such as word length or syllable count. So vocabulary seems worth measuring.

But exactly what does an instructor want to know about a reader's vocabulary? What does an adult mean, when he or she says "I know that word"?

It would be useful for instructors to have some idea of the breadth and depth of a person's vocabulary. "Breadth" indicates the number of words for which the person knows at least **one** meaning; "depth" is the ability to understand **all** of the possible meanings of those words. Each of these dimensions has special significance for adult learning, given the potential of the adult through life experiences to increase consistently both the breadth and depth of vocabulary.

In reality, instructors are more likely to get to know the vocabulary of their students by reading and learning with them over several months. However, tests can be useful, especially in getting a "ball-park" idea of the level of material a person can handle at the beginning of a course of study. Nevertheless, such tests can only **sample** a person's word knowledge. The following cautions need to be observed:

- What is the reader asked to **do** in order to demonstrate that this word is "known"? Commonly, test items require the reader to choose a synonym from a multiple-choice list, or to define the word, or to use it in a sentence.
- Does the way in which the reader chooses to indicate knowledge of the word match the instructor's idea about what it means to "know a word"?
- Is there a time limit on the test? If so, are you testing vocabulary, or the speed at which a student can work through vocabulary questions?
- Are the words on the vocabulary list presented in isolation rather than in the context of a passage? If so, is this the way that readers use word knowledge in actual reading situations?

There is a simple solution to vocabulary testing on the informal level. An instructor can ask a student, "Do you know this word in this sentence?" In most cases the answer will be a plain and simple one, such as

- "I know it," or
- "I recognize it in the sentence — it has something to do with . . .," or
- "I've heard of it but I don't know what it means," or
- "I never heard it before."

So long as the word has some use for that particular student, this method is valid, reliable, and economical in terms of time and effort. Unfortunately, it is not quite so easy to measure comprehension.

Measuring Comprehension

Comprehension is the process of getting meaning from a communication. But how is one to know that a person has completed the process satisfactorily? The traditional method of assessing comprehension in reading has been to ask questions of the reader. If the questions are the "right" ones, and the answers are the "right" ones, then the instructor determines that comprehension, however unobservable, has taken place. The procedure is evidently quite fallible.

Much effort has gone into the art and technology of devising the "right" type, level, and mix of questions. Most standardized tests reflect this expertise, and informal assessments also follow this basic pattern: select a number of representative passages and frame a number of questions that will assess a reader's understanding of the passage. (See also Article 5 for the guidance of instructors who wish to make up their own informal comprehension items.)

There are, however, a number of inherent difficulties in the question and answer approach. They include variable **characteristics of the text** such as length, subject matter, complexity of ideas and expression, and the rhetorical type and organization of the passage. In additon, there are **reader variables** such as the reader's background and interest in the subject, purpose for reading, attitude toward testing, and "test-wisdom." Finally, there are varieties of **the test situation** itself — timing, length, formality, question format, and (not least) whether or not the reader is allowed to look back at the text to find the answers.

While the question and answer method is used most often to measure comprehension, instructors should recognize the many variables that may influence the results and affect interpretation.

As for interpretation of comprehension tests, the practice is different for standardized and informal tests. A standardized test score indicates a person's comprehension ability compared to a "norm" group of other readers, such as a Grade 10 or 12 class. A score may indicate how high or low one's standing might be, compared to the reading ability of people in that norm group.

This may be expressed as a percentile rank or as a "stanine score" (see Glossary). It should be noted that "grade-equivalent" scores are generally inappropriate for ABE and are no longer favored by reading specialists, even for schools testing.

The informal comprehension test, by contrast, compares a person's reading to a more pragmatic standard, as in the following chart.

Informal Comprehension Test Score		Indication
Comprehension	Word Accuracy	
90% or more	99%	The reader is **independent** in this type (or level) of material.
70-90%	About 95%	This material is at an **instructional** level for the reader (i.e., the material is challenging, but some assistance or instruction may be required).
Less than 70%		The reader is **frustrated** with reading this material (i.e., many key words are probably not known, and anxiety is likely to be high).

A number of different methods have recently become common practice. They tend to place much less emphasis on how well a person answers questions of different types or levels and instead give more attention to how a person "interacts" with the text. These methods include cloze (the reader supplies words that have been omitted from the text), retelling the content of passages in one's own words, asking and answering one's own questions about the passage, and otherwise demonstrating one's understanding of the meaning. The cloze technique also provides interpretation in terms of the independent, instructional, and frustrational levels, and is becoming a particularly useful approach not only to testing and instruction but also to the analysis of a book's readability. The uses of cloze for assessment are taken up again in Article 5.

Measuring Reading Rate and Speed of Comprehension

The measurement of reading rate itself is certainly a very straightforward affair. A person is presented with a piece of continuous text and asked to read to the end of it (or to read for a certain number of minutes). The number of words in the passage is divided by the number of minutes and the result is the reading rate in words per minute (wpm). Adult reading rates usually vary between 100 wpm and 800 wpm, the average falling between 250 and 300 wpm. These average rates, not surprisingly, are quite close to people's rates of speaking — for, as many adults will admit, they tend to "talk inwardly" while engaged in silent reading.

But you can get people to read faster, at least to "get through the words," just by telling them to read faster. Researchers have coaxed up to eighty percent gain in this way. So rate alone does not mean much, and some check of comprehension is logically required along with the checking of the rate. Often, to get closer to real-life conditions, a purpose for reading is also added. The instructions for the reading rate assessment thus might be: "I'd like you to read through this passage as you normally would. Read to understand the main ideas and the important details of the passage. When you've finished there will be some questions to answer."

Thus there are now two "results" — a reading rate in wpm and a comprehension check in percent. Now for the tricky part — interpretation. What is being measured? Furthermore, what is the instructor to do with the results?

It is only fair to note that few ABE instructors would be likely to put too much weight on this one sample of a person's speed at a simulated reading task. Perhaps (along with other information about the reader's vocabulary, comprehension in untimed tests, background in reading interests, and attitudes) these data on reading rate could help build a picture of the person's overall approach to reading, and success as a reader. The more samples of reading performance taken, the more reliable will instructor judgment become. And the closer these reading tasks approximate the actual conditions of reading tasks in the adult's daily world, the more valid will be the measurement.

Reading rate is not too important for many adults, but **speed of comprehension** often is. From the recent graduate of the basic literacy class to the business executive enrolled in a part-time reading development course, adults realise the immediate value of quickening the pace at which they can read **and understand** material — not just any material, but the kind of material that they currently want to read with more efficiency (i.e., textbooks, business reports, church magazines, hobby journals, or Harlequin novels). Even for readers at the slow end of the spectrum, there is often merit in moving more quickly through the text, as only in this way may the "gist of it," or the broad idea, be grasped.

Consequently, the measurement question is not just "How fast can you read?" or even "How fast can you read to get a passing score on these questions?", but rather "Under these conditions, how long does it take you to understand what you want to get out of this kind of reading?"

This key question, and the answers that students provide to it, may readily lead to practical decisions about instruction, as the instructor also evaluates such variables as reader purpose, subject matter content and structure, interest, distractions, and other aspects of the reading environment — all of which affect reading comprehension.

Finally, measurement and instruction in the area of speed of comprehension should take into account the need of most adults for **flexibility** of reading rate. Skimming for the general idea, scanning rapidly for specific "spot" information, and slowing down to a crawl for critical detailed study are flexibility skills that come into the picture of both assessment and instruction.

Why is it so difficult to measure reading ability? Perhaps the answer is that reading is indeed a complex and specialized human endeavor. Or perhaps the problem is that so much of the reading act is unobservable. So when we measure reading ability, we need to have a much clearer idea of what we want to observe, and how we will use that knowledge to help readers.

The following list of learning objectives (Example 1) provides a range of competencies in comprehension, vocabualry, and rate that might form the basis of assessment and instruction.

EXAMPLE 1: LEARNING OBJECTIVES FOR READING IMPROVEMENT

Comprehension:

- Read in thought units to make sense of text or to reconstruct the meaning intended by a writer.
- Identify a writer's stated or implied purpose.
- Identify major ideas and supporting detail that is **explicitly** stated.
- Interpret probable meaning when it is **not** directly stated.
- Relate reading to previous experiences and present knowledge, integrating new understandings as they are examined.
- Recognize or infer sequences of key events, comparisons and contrasts, and cause-effect relationships.
- Predict likely outcomes or sequels of a narrative or exposition.
- Identify or infer a writer's point of view, attitude to a subject or audience, and underlying assumptions.
- Distinguish between fact and opinion, logical and illogical arguments, and objectivity and prejudice.
- Recognize one's own attitudes that may affect comprehension.

Vocabulary:

- Build a broad reading vocabulary, developed through reading a wide variety of material rather than the study of word lists.
- Develop a range of word identification skills for independent reading, including use of context and word structure.
- Using a dictionary or glossary, find the meaning of unfamiliar words; recognize the additional information about words that a dictionary provides; expand and vary vocabulary by using a thesaurus.

Rate:

- Adjust reading rate and approach to suit purpose for reading and difficulty of material.
- **Skim** to determine whether material is relevant to purpose and to gain a rapid overview of the nature and content of material.
- **Scan** to locate specific information, especially detail.

Resources

Anderson, Richard C., and Peter Freebody. "Vocabulary Knowledge." *Comprehension and Teaching: Research Reviews*. Ed. John T. Guthrie. Newark, Del.: International Reading Association, 1981. 77-117.

British Columbia. Ministry of Education: Continuing Education Division. *ABE English and Communications Curriculum Guide*. Victoria, B.C.: Queen's Printer, 1982. ($5.00)

———. *Adult Basic Literacy Assessment Kit*. Victoria, B.C.: Queen's Printer, 1980. ($5.00)

———. *Reading Development: A Resource Book for ABE*. Victoria, B.C.: Queen's Printer, 1982. ($2.00)

Dale, Edgar, Joseph O'Rourke, and Henry A. Bamman. *Techniques of Teaching Vocabulary*. Palo Alto, Calif.: Field Educational Publications, 1971.

Farr, Roger. *Reading: What Can Be Measured?* Newark, Del.: International Reading Association, 1969.

Johnston, Peter H. *Reading Comprehension Assessment: A Cognitive Basis*. Newark, Del.: International Reading Association, 1983.

3. ASSESSING ATTITUDES AND INTERESTS

Reading instructors, as well as vocational, business, and other instructors, know the impact that reading attitudes and interest have on learning in general and on reading performance in particular. Thus, a goal of most reading courses is to encourage and foster a person's inclination to read for enjoyment as well as for information. To better select strategies and materials for this goal, instructors need to learn something about learners' attitudes, interests, and other relevant background, as well as the way they look at their own approach to reading.

Reading researchers differ in their opinions about the relationship between these variables. However, ABE instructors would probably agree that students' reading performance reflects the cumulative interaction of learner attitude, interest, background, and self-concept. Some would group all of these factors under the heading of "attitude"; others would view them as separate entities. Similarly, while some assessments are designed to measure only one of these factors, others purport to measure them all.

This article briefly examines the nature of attitudes, interests, and learner background and provides some examples of informal ways to gather information about them. Also included is a sample "Reading Self-Assessment" (see Example 6).

Attitudes

Reading attitudes are far more complex than what can be conveyed by the answer to such a questions as "How do you feel about reading?". For instance, the student who claims to dislike reading, and who does as little reading as possible, may still see reading as having some value in achieving career goals. How would this attitude be evaluated? Does it represent a positive or a negative attitude toward reading? Another student reads for pleasure but sees reading as contributing nothing toward the accomplishment of career goals. Again, can this attitude toward reading be classified simply as positive or negative?

It would seem that reading attitudes should be recognized for their multidimensional nature. Lewis and Teale[1] have suggested three factors to consider when examining reading attitude:

- an **individual development factor** — the value one places on reading as a means of gaining insight into self or others;
- a **utilitarian factor** — the value one places on reading in achieving educational or vocational goals;
- an **enjoyment factor** — the value one places on reading for pleasure.

Depending on the task at hand, these factors would receive different emphasis in the mind of the reader. It might be useful to consider each of them when designing and interpreting measures of attitude. Other important variables associated with attitude include interest, achievement, self-concept, home environment, learning environment, sex, test-wisdom, and socio-economic status. It is not suggested, however, that all these factors require, or lend themselves to, "measurement."

Reading attitude may be assessed in a variety of ways, but for each of them, a preliminary caution is in order: some students may depend on "test-wisdom" and yet give "acceptable responses." Thus it will usually be helpful to verify results through informal observation or through other means, such as the following.

- **Attitude scales** require learners to rate a number of statements. Several attitude scales with established validity and reliability have been published, though none has been developed specifically to assess the attitude of adults.

  Example 1 illustrates a type of scale that might be used or adapted for adult readers. It is important for instructors to check that any chosen scale measures reading attitude as they themselves might define it.

- **Interviews** or conferences are probably most productive when they arise naturally. It is sometimes useful to structure a series of questions in advance in order to get an idea of the amount and quality of reading done. Interview data may also be used to confirm impressions from other assessment sources.

- **Questionnaires** provide a direct method of determining reading attitude. Specific yes/no questions can be posed (e.g., "Do you like to read?" "Do you have a library card?"). Alternatively, open-ended statements can be presented (e.g., "I like to read when . . . ." "Reading is helpful for . . . .").

- **Observation** over time is one of the most important ways of assessing or validating attitudes. Instructors may develop checklists of positive and negative indicators such as "Reads whenever possible"; "discusses books with other"; "comes early/stays late to read"; "uses the library"; "avoids reading tasks."

  These indicators might be rated on a five-point scale (e.g., always, often, sometimes, seldom, never). Changes in reading behavior are sometimes quite significant. To improve reliability, instructors should space observations over a period of time and try to avoid any bias.

EXAMPLE 1:
MIKULECKY BEHAVIORAL READING ATTITUDE MEASURE[2]

Below are twenty statements. Please indicate how much these descriptions are either unlike you or like you. For "very unlike" you, circle the number 1. For "very like" you, circle the number 5. If you fall somewhere between, circle the appropriate number.

1. I walk into the office of a doctor or dentist and notice that there are magazines set out.

   VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

2. People have made jokes about my reading in unusual circumstances or situations.

   VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

3. I am in a shopping centre I've been to several times when someone asks where books and magazines are sold. I am able to tell the person.

   VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

4. I feel very uncomfortable because emergencies have kept me away from reading for a couple of days.

   VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

5. I am waiting for a friend in an airport or supermarket and find myself leafing through the magazines and paperback books.

   VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

6. If a group of acquaintances would laugh at me for always being buried in a book, I'd know it's true and wouldn't mind much at all.

   VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

7. I am tired of waiting for the dentist, so I start to browse through a magazine.

   VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

8. People who are regular readers often ask my opinion about new books.

   VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

9. One of my first impulses is to "look it up" whenever there is something I don't know or whenever I am going to start something new.

   VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

10. Even though I am a very busy person, there is somehow always time for reading.

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

11. I've finally got some time alone in my favorite chair on a Sunday afternoon. I see something to read and decide to spend a few minutes reading just because I feel like it.

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

12. I tend to disbelieve and be a little disgusted by people who repeatedly say they don't have time to read.

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

13. I find myself giving special books to friends or relatives.

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

14. I look in the display window of a bookstore and find myself interested in some books and uninterested in others.

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

15. Sometimes I find myself so excited by a book I try to get friends to read it.

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

16. I've just finished reading a story and settle back for a moment to enjoy and remember what I've just read.

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

17. I choose to read "non-required" books and articles fairly regularly (a few times a week).

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

18. My friends would not be at all surprised to see me buying or borrowing a book.

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

19. I have just become comfortably settled in a new neighborhood. Among the things I plan to do is check out the library and book stores.

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

20. I've just heard about a good book but haven't been able to find it. Even though I'm tired, I look for it in one more book store.

VERY UNLIKE ME 1 2 3 4 5 VERY LIKE ME

Interests

Information about reading interests (what a person likes to read), as well as information about general interests, preferences and needs, and likes and dislikes, can have several uses for instructors. First, the use of reading material that contains relevant, familiar vocabulary and concepts is likely to promote a successful, pleasurable experience. Secondly, when learners are continually provided with materials of interest, they are more likely to be encouraged to develop lifelong reading habits. They will recognize that print materials are often a source of information for solving a problem, satisfying a need, or answering questions, and that such useful sources of satsifaction are readily available in most communities.

Interests, like attitudes, are often associated with such variables as age, sex, intelligence, socio-economic status, and environment. Interests also change. Inventories given early in the course provide the instructor with the information to make specific choices of materials and strategies that will be of interest to students. Later, as the course proceeds, instructors need to remain sensitive to new interests awakened and old ones cast aside.

Interest inventories can easily be constructed by instructors and can cover a broad range of personal, social, and vocational concerns. The inventories can be used in an interview (or in other one-to-one situations) or in written form through checklists or questionnaires.

Because interests and reading preference are so individual and so subject to change, caution should be used in drawing conclusions. An interview or conference should also be used.

Examples 2 and 3 illustrate simple inventories of personal, social, and vocational interests. Examples 4 and 5 are longer general-interest inventories.

EXAMPLE 2: PERSONAL-SOCIAL INTEREST INVENTORY

Name: _____ Date: _____

I would like to learn more about the items checked:

_____ nutrition
_____ child care
_____ family relationships
_____ consumer rights
_____ government agencies
_____ housing
_____ health & fitness
_____ women's issues
_____ legal concerns

EXAMPLE 3: VOCATIONAL INTEREST INVENTORY

Name: _____ Date: _____

I would like to learn more about the items checked:

_____ job interviews
_____ job opportunities
_____ job futures
_____ job requirements
_____ job agencies
_____ job taining
_____ job vocabulary
_____ job safety
_____ unions

EXAMPLE 4:
GENERAL INTEREST INVENTORY

1. Apart from course work, about how much time each day to you spend reading?

   _____

2. Have you read a book in the past two or three months? _____

   a) What are the titles of some books you have been reading?

      _____

   b) How many books have you borrowed from friends during the last month? ___ _____ Give titles of some _____

   c) How many books have you loaned to friends during the last month? _____ Give titles of some _____

      _____

3. Do you have a card for the public or school library?

   _____

4. How many books do you have of your own?

   _____

5. About how many books do you have in your home? _____.

   Give the titles of some. _____

   _____

6. From what sources (other than your home, libraries, and friends) do you obtain books?

   a) Buy them _____ c) Rent them _____

   b) Gifts _____ d) Exchanges _____

7. Underline the kinds of reading you enjoy most: history, travel, plays, essays, adventure stories, science, poetry, novels, detective stories, fairy tales, mystery stories, biography, music, art.

8. What kind of work do you want to do when you finish the course?

   _____

9. What newspaper(s) do you read?

_____

10. What sections of the newspaper do you like best? Check below.

Sports	_____	News	_____
Comics	_____	Editorials	_____
Stories	_____	Other	_____

11. What magazines are received regularly at your home? (Underline those that you read.)

_____

12. Name your favorite magazines.

_____

13. Where do you get your magazines?

_____

14. Name the three movies you last saw.

_____

15. Name the three radio or TV programs you like best.

_____

16. Name the town/province/state/country farthest away that you have visited.

_____

EXAMPLE 5: INTEREST CHECKLIST

1. In my spare time I enjoy:

SPORTS

_____ soccer
_____ swimming
_____ bicycling
_____ racketball
_____ baseball
_____ basketball
_____ volleyball
_____ handball
_____ tennis
_____ judo/karate
_____ golf
_____ running
_____ badminton
_____ ping pong
_____ bowling
_____ skiing
_____ pool
_____ skating
_____ hockey
_____ hiking
_____ walking
_____ working out

HOME ARTS

_____ cooking
_____ sewing
_____ knitting
_____ crochet
_____ macrame
_____ weaving
_____ pottery
_____ decorating
_____ cosmetics
_____ family life
_____ carpentry
_____ general home repairs
_____ gardening & house plants
_____ consumer affairs
_____ medicine
_____ auto mechanics
_____ antiques
_____ wine making

FINE ARTS

_____ painting
_____ ballet
_____ opera
_____ theatre
_____ movies
_____ T.V.
_____ literature
_____ photography
_____ music

GENERAL INTEREST

_____ science
_____ stamps
_____ coins
_____ future
_____ astrology
_____ politics
_____ economics
_____ animals
_____ first aid
_____ current affairs
_____ religion
_____ women's movement

2. When I read a newspaper, I spend some time on these items (circle one number for each item):

Item	Rarely	Sometimes	Often
sports	1	2	3
comics	1	2	3
news	1	2	3
editorials	1	2	3
business (stocks, real estate, banking)	1	2	3
advertisements	1	2	3
entertainment	1	2	3
fashion	1	2	3
foods	1	2	3
advice columns (youth clinic, Ann Landers, medical information)	1	2	3
travel	1	2	3

3. If I had to choose a book to read in class for an assignment, I would choose one of these types (check the **five** that interest you):

— history,
— historical fiction,
— travel,
— adventure,
— nature,
— western,
— mystery or detective,
— biography,
— animal stories,
— personal improvement,
— science fiction,
— supernatural,
— romance,
— "do-it-yourself,"
— sports.

Other Learner Background

Certain aspects of the learner's experience and personal life will influence adult reading performance. These include personal data, some health information, and previous instruction or courses in reading. Such information, carefully obtained, may both explain and anticipate problems that students may encounter with reading.

The reading performance of learners whose personal life allows little opportunity for reading is likely to reflect this fact. Similarly, language background, health, and other personal or social problems frequently interfere with learning efforts of ABE students. As well, many people may have been adversely influenced by early experiences in reading and learning or may have received attitudes towards reading and its value that they have not yet learned to challenge.

Background information about the learner can be gathered through any simple questionnaire. It may be used in an interview and completed by either learner or instructor. Background information may already be available through existing records. The usual cautions should be exercised with respect to the confidentiality and sensitivity of personal background information.

Reading Self-Assessment

Information on how learners view themselves in terms of reading performance is frequently an accurate predictor of reading behavior. Previous experience with success and failure in reading typically influences performance.

Example 6, the final illustration in this article, consists of a complete "Reading Self-Assessment" (developed by Linda Bailey, of Vancouver Community College) that students complete in the first two weeks of an ABE Communications course. An interesting blend of assessment and instruction, it illustrates the necessary connection between the two. It also provides the structure for readers to begin to find out for themselves, rather than be told, what kind of readers they are and what they might become. There are numerous ways instructors might use or modify this approach to their own needs.

EXAMPLE 6:
READING SELF-ASSESSMENT[3]

Begin by asking yourself this question:

> "Do I read everything at the same speed, or do I read different things at different speeds?"

How Fast Should You Read?

Well, that depends. It depends on what you are reading and why you are reading it. You should read different things at different speeds.

What are you reading? How hard is it? Is it difficult material with a lot of new vocabulary — a science textbook, or a legal document? Then slow down. Make sure you understand. Is it easy reading where all the vocabulary is familiar to you? Feel free to speed up.

Why are you reading it? Are you reading it so that you can understand and memorize facts for a test? Then don't expect to race through it; you'll have to read slowly and carefully. On the other hand, you might be reading just for entertainment; maybe you're leafing through the newspaper over coffee in the morning. There's no reason to read slowly and carefully here. All you want is a basic idea about what's happening in the world. Read as fast as you like, and skip over the less important parts.

A good reader may be compared to a good driver. If you're a good driver, you have more than one speed. You constantly slow down and speed up, depending on the road conditions. Similarly, if you want to be an efficient reader, you should try to develop more than one reading speed.

In fact, you will probably want to develop at least three different reading speeds:

1. **Slow speed:** You probably already have this speed — most people do. In fact, for many people, it's the only speed they have. This is a good speed to use when you need to understand or remember all the details of what you're reading, for example a math problem, a science textbook on which you will be tested next week, or your divorce papers.

2. **Medium speed:** This is a good speed to use when you're reading for general information or entertainment. You want to absorb what you're reading, but you don't need to get bogged down in every word or detail. You might use medium speed for stories in the newspaper, a best-seller you're reading for pleasure, a magazine article, or a letter from a friend.

3. **Fast Speed or Speed Reading:** The fast speed is what many people pay hundreds of dollars to learn in speed reading courses. You skip over most of the words and read only the really important ones. Two kinds of speed reading are called skimming and scanning.

   You **skim** when you just want to get a general idea of what something is about (for example, when you pick up a book at the book store and leaf through it, or when you glance through a newspaper to get a general idea of today's news).

   You **scan** when you rapidly look over something to locate a specific detail (for example, when you glance through the T.V. guide to see what's on at 8:00 tonight, or when you search rapidly through a textbook to find the answer to a particular question).

In the Reading Improvement course, you will work on increasing your medium rate of speed. (This is what you are doing when you do timed reading drills each day.) You will also learn the speed reading techniques of skimming and scanning.

This doesn't mean, however, that suddenly you will want to read everything fast. What it does mean is that you will now have three speeds to choose from (slow, medium, and fast) depending on **what** you are reading and **why** you are reading it.

Have a look at the following situations and decide which reading speed is most appropriate.

1. You are reading a letter from a friend who's moved to Toronto to join a punk rock band. It's fairly easy to read, and you want to know how she's doing. You should use:

   (a) slow speed

   (b) medium speed

   (c) fast speed

2. You've made a list of people to share your lottery winnings with, and you want to be sure you've included your reading instructor's name. You should use:

   (a) slow speed

   (b) medium speed

   (c) fast speed

3. You are buying a discotheque in Spuzzum, B.C., and your lawyer gives you the final papers to read and sign. You should use:

   (a) slow speed

   (b) medium speed

   (c) fast speed

4. You're at the bookstore and you're holding a copy of *Everything You Wanted to Know About Sex but Were Afraid to Ask*. It costs $12.95, and you want to be sure it's worth the money before you buy it. You should use:

   (a) slow speed

   (b) medium speed

   (c) fast speed

If you are going to improve your reading, it will help to know something **about** reading — about what our eyes and brains do when we read.

Begin by looking at the following statements and deciding whether you think they are true or false. (Don't worry about guessing wrong. You will have a chance to answer them again after reading the next section.)

_____ 1. It is important to concentrate on every single word when you read.

_____ 2. When you read, your eyes move smoothly and evenly across the page from one side to the other.

_____ 3. It is helpful to move your lips and whisper the words as you read.

_____ 4. When you come to a word you don't understand, you should stop reading until you understand it.

_____ 5. When you read, you don't do much. A reader is just like a sponge absorbing information.

How You Read (and How To Do It Better)

Most people think that when they read, their eyes are moving smoothly across the page from one side to another in a very even, regular way.

This is not so.

Since about 1920, scientists have been using different methods to study what the eye does as it reads a page of print. One such method is photography; scientists have photographed the eye as it reads, and they've also photographed what the eye sees as it moves.

What they've learned is this. Your eyes do not move smoothly across the page as they read. Your eyes actually **jerk** across the page. They move and stop and then move again and stop again, etc. In fact, your eyes only move about 5% of the time when you are reading. The other 95% of the time they are stopped.

Read Ideas, Not Words

When your eyes stop, they are focussing on words. If you are a slow reader, your eyes may stop and focus on every single word:

If you are a word-
by- word reader, you
will focus on every single
word separately and with
the same amount of attention,
and you may lose the
idea of what you are
reading. You will probably
read very slowly.

If you are an efficient reader, however, your eyes will take in more than one word at each eye step. Efficient readers read in idea-phrases. These idea-phrases are usually only a few words long. The important thing about them is that they show that the reader is reading **ideas**, not words.

It is much better to read like this
for the idea. Words are important; they are
not all-important. Concentrate on the
idea.

If you are a word-by-word reader, chances are that somewhere back in Grade 1 or 2 your teacher told you to go very slowly and sound out every word separately. As a beginning reader, you may have made this into a habit. Now, however, you are an adult reader. If you still have that habit, it is probably time to shake it. Concentrate on **ideas** instead of words, and two things will happen — you will read faster, and you will understand more.

Analyse yourself: Do you read word-by-word or in idea-phrases?

Regressing

Some of the time when you are reading, your eyes are actually taking backward jumps on the page to re-read a few words, a line, or even two lines. This is called regressing. All readers do a certain amount of regressing when they are trying to understand something they've missed. Difficult material sometimes requires a lot of re-reading and back-tra king.

For some slow readers, however, regressing has become a bad habit. They constantly look back and re-read even when they don't really need to. Often the problem is lack of confidence; these readers don't believe in their own ability to understand and so they re-read almost everything.

Analyse yourself: Does too much regressing slow you down?

If you think this is a problem for you, try this experiment. As you read, block out what you've already read with a sheet of paper. Let the paper follow your eyes down the page, covering each line as you finish reading it. Do you see how this will make it impossible to regress? Check your comprehension afterwards. Did you miss much by not being able to look back?

Pausing

As we said earlier, your eyes constantly make stop-and-go movements across the page as you read. Some readers spend too much time on the "stop" part. They are continually **pausing** as they read. They get "stuck" whenever they hit a new word or idea.

These readers would often be surprised to find that if they just ignored the problem for the moment and carried on, it would all become clear. The next sentence or the one after that might explain the new word or idea. Studies show that efficient readers have developed that habit of pushing on past small problems in reading. They don't allow themselves to get bogged down in details. They don't stop dead at every new word.

Too much pausing will slow you down. It can also make you lose track of the main idea of what you're reading.

Analyse yourself: Is frequent pausing a problem in your reading?

Skipping Over Unimportant Words

Do you feel that you are "cheating" if you don't look carefully at **every** word? Try to make sense out of the following paragraph.

> . . . . is. . . . true. . . . revolution. . . . sweeping through. . . . schools. . . . colleges. . . . Much. . . . not all. . . . what is happening. . . . excellent. . . . Yet. . . . three changes. . . . my opinion. . . . must be part. . . . any program. . . . educational reform. . . . make education suitable. . . . changing age.

With a bit of thinking, you can probably make sense out of what you just read. Now look at the whole paragraph.

> It is true that a revolution is already sweeping through our schools and colleges. Much, though not all, of what is happening is excellent. Yet there are three changes that, in my opinion, must be part of any program of educational reform to make education suitable for a changing age.

Did you **need** all the left-out words to understand?

Notice that the first paragraph contains only the important words. These are the words you need to focus on to understand the author's ideas.

The second paragraph includes a lot of unimportant words. These are words that you can safely skip over as you read. Words like "a," "an," "the," and "is" do not carry the main message. You can allow your eyes to pass quickly over them as you read. Concentrate on the words with the message.

Analyse yourself: Do you allow yourself to skip over unimportant words?

Unnecessary Movements

The only things that should move when you read are your eyes and your brain.

Some people think that their lips, tongues, throats, and fingers can help them to read. While reading silently, they may move their lips to pronounce the words. Or they may keep their lips still but "read aloud" in their throats. (You can test yourself for this by placing your fingers over your throat as you read. Do you feel any vibrations? If you can, you may be "reading aloud" in your throat.)

Think about this. Even the fastest speakers speak less than 200 words per minute. If you "speak" while you read, you will automatically limit yourself to a slow reading rate.

Another unnecessary movement is moving your finger across the page as you read. Again, this will slow you down. Your finger will not be able to keep up with the lightening-like speed of your eyes and your brain. It will get in the way and slow you down.

Wagging your head from side to side as you read is another unnecessary movement. It will also have a slow-down effect.

Try to eliminate unnecessary movements when reading. If your lips move, try placing a finger or a pencil over them while you read. If you really must keep track of your reading with your forefinger, try moving it straight down the center of the page to make yourself read faster.

Better yet — let your eyes and brain do the work of reading. Keep the rest of your body out of it.

Analyse yourself: Do unnecessary movements slow you down when you read?

Clue Blindness

Clue blindness is a common problem when people read textbooks. The authors of textbooks usually try to help the reader out by providing a number of "clues" about what they are saying.

Headings and sub-headings are the best of these clues. The author is telling the reader what the main idea or topic is (the heading) and what the lesser ideas of this are (sub-headings). Other clues include illustrations, summaries, and end-of-chapter questions.

Efficient readers watch for these clues and use them. They get the "big picture" first by previewing headings and sub-headings. Once the "big picture" is in place in their minds, they can read to fill in the details.

Clue-blind readers don't even notice the author's clues. They are "blind" to headings and sub-headings. They dive right into the details and get lost there. They might memorize a list without even noticing what it is a list **of**. They read each line or paragraph separately and never do get a "big picture" of the chapter.

Analyse yourself: Do you suffer from clue blindness when you read a textbook?

Clue-blindness can be helped by **previewing** textbook chapters before you read them. When you preview, you focus only on the "big picture." You may also find it helpful to make a list of headings and sub-headings to keep them straight in your mind.

Passive Reading

"Passive" is the opposite of "active." If you are a passive reader, you believe that a reader is like a barrel waiting to be filled with beans. The barrel doesn't have to "do" anything. Similarly, a passive reader believes that he or she doesn't have to "do" anything either. The author is supposed to do all the work of "filling up" the reader's brain.

This is not true of good reading. Good reading is a two-way communication process. The author brings new information and ideas to the printed page, and you bring **your** experience and **your** ideas to the printed page. Your own experience and ideas allow you to respond differently from other readers of that same page and to get different things out of it.

A good reader is an **active** reader. If you are an active reader, you will get mentally involved in the act of reading; you will contribute to it by asking yourself questions such as

- "What does this mean?"
- "Why is the author saying this?"
- "What (if anything) can I learn from this author?"
- Do I agree? ("This is exactly right.")
- Do I disagree? ("This is nonsense/lies/garbage.")
- Can I relate what the author says to my own experience? ("I remember when something like this happened to me. . . .")

As an active reader, you will make demands on what you are reading. The more demands you make, the more you are likely to get from what you read. This is especially important in study reading. In study reading, the more you ask mental questions, the more you will remember mental answers.

Analyse yourself: Are you an active or a passive reader?

Now, having read the last section, have another try at the true/false questions you looked at in the beginning. When you have finished, compare your answers with your first attempt.

_____ 1. It is important to concentrate on every single word when you read.

_____ 2. When you read, your eyes move smoothly and evenly across the page from one side to the other.

_____ 3. It is helpful to move your lips and whisper the words as you read.

_____ 4. When you come to a word you don't understand, you should stop reading until you understand it.

_____ 5. When you read, you don't do much. A reader is just like a sponge absorbing information.

Discuss your reading self-assessment with your instructor.

References

[1] Ramon Lewis and William H. Teale, "Another Look at Secondary School Students' Attitudes Toward Reading," *Journal of Reading Behavior*, 12 (Fall 1980), pp. 187-210.

[2] Adapted from Carl B. Smith, Sharon L. Smith, and Larry Mikulecky, *Teaching Reading in Secondary School Content Subjects: A Bookthinking Process* (New York: Holt, Rinehart and Winston, 1978), pp. 100-102. Reprinted by permission of the publisher.

[3] Linda Bailey, "Reading Self-Assessment," Vancouver Community College, King Edward Campus, 1982 (unpublished).

Resources

Alexander, J. Estill and Ronald C. Filler, *Attitudes and Reading*. Newark, Del.: International Reading Association, 1976.

Lehr, Fran. "Identifying and Assessing Reading Attitudes." *Journal of Reading*, 26 (October 1982), pp. 80-83.

4. ASSESSING CONTENT AREA READING AND STUDY SKILLS

While basic reading skills may be considered universally applicable, the content areas such as science, mathematics, and social studies demand much more of a student than does general reading. Adult learners, in particular, with their varied backgrounds and experience, may have forgotten critical study techniques or may never have learned them.

Both learner and instructor may profit from effective techniques to increase the learner's grasp of knowledge in the content area. It is worthwhile for the content area instructor to determine how well students are prepared for learning in that subject.

Assessment of content area reading and study skills provides a sound basis for developing effective instruction. To maximize instruction in a particular content area, it is necessary to have a clear idea of (a) where learners are starting from, (b) where they are going, and (c) how they will know when they get there.

Information concerning the amount of background knowledge possessed by the reader offers guidance in making such decisions as what to include in a unit of study, how to relate new concepts to past experiences, the rate and sequence of instruction, the most effective teaching learning procedures, and the selection of learning materials. Broad course goals establishing knowledge and skills to be mastered indicate where the learner is going and serve as the basis for assessing learner behavior. Assessment of individual strengths and weaknesses throughout the course provides continuing opportunity to measure the achievement of goals.

Three guidelines apply generally to assessment of content area reading and study skills:

- **Broad course goals should be established before assessment takes place.**

  These goals provide information on where the learner is going and, once established, provide a standard against which to measure learner performance. It is not necessary to have all the detailed instructional goals or objectives in place prior to assessment. While goals established to guide the course are unlikely to change, objectives at the instructional level may be modified according to information gained from assessment.

- **Tasks and tests relevant to the content area should be used as the basis of assessment.**

  For instance, the instructor who expects the results of a **general** vocabulary knowledge test to indicate which learners may have difficulty with the **technical** vocabulary in the biology text is likely to be disappointed. The best content area assessments require learners to carry out tasks similar in complexity, using materials similar to those that must be faced in actual study. Learner performance on these tasks will suggest which instructional approaches are most appropriate to help students achieve learning objectives.

- **Content area instructors should consider each student's approach to the process of reading and learning.**

  How a student goes about reading and learning may be more critical to success than merely **what** is learned.

What May be Assessed

Typically, content area instructors determine

- what prior knowledge, skills, and attitudes the learners must possess in order to cope with the new material in the subject;
- what evidence of knowledge, skills, and attitudes will indicate that learning has taken place.

The following list outlines the areas that may be assessed to gain information for instructional planning.

- **Vocabulary:** the reader's ability to understand specialized or technical terms related to the subject area.
- **Knowledge:** the reader's ability to understand concepts specific to the subject area.
- **Attitude and Interest:** the reader's attitude and interest in the subject (see Article 3).
- **Learning Processes:** the reader's ability to use the skills and approaches necessary for learning in the subject area.
- **Application:** the reader's ability to apply subject knowledge to other related contexts.
- **Readability:** the readability of texts and other resource materials (see Article 6).

A more comprehensive list of content area reading skills is available in most reading texts as well as in *Reading Development: A Resource Book for ABE* and in the *ABE English and Communications Curriculum Guide* (both B.C. Ministry of Education, 1982). A typical range of learning objectives is shown in Example 1.

EXAMPLE 1:
LEARNING OBJECTIVES FOR ASSESSMENT AND INSTRUCTION

Reading to Learn:

- Know how to apply several study techniques (such as surveying, questioning, underlining, memorizing, and structured note-taking).
- Locate and use a variety of resources to obtain information on a topic (including access by library catalogues and bibliographies and through the help of resource people).
- Select the textbooks, encylopedias, periodicals, and other print materials most likely to yield required information.
- Use book features such as table of contents, chapter headings, summaries, and indexes as aids to efficient, purposeful reading.
- Interpret data, graphs, and charts to learn information and understand relationships; use atlases and maps.

Reading for Exam Preparation:

- Understand purpose and structure of examinations for certification entry prerequisites, union affiliation, etc.
- Distribute reading, writing, and problem-solving time effectively under exam conditions.
- Understand and follow directions commonly used in test items, especially key words.
- Apply skimming and scanning techniques in reading test material.
- Understand and respond appropriately to different types and forms of questions (e.g., knowledge, inference, essay, and multiple choice).

How to Collect Information

Scores from standardized tests do not give an adequate indication of proficiency in reading selections from particular subject areas. In fact, few of these tests examine the learner's ability to handle specific reading skills such as understanding text organization or drawing inferences. Thus, a better approach for obtaining information may well be an assessment developed by the instructor that uses actual materials from the content area. Instructor-made assessments may be based on a variety of information sources including observation, pre- and post-chapter or unit tests, quizzes and assignments, class discussions, and problem situations.

Another form of assessment may consider the difficulty of the materials or readability of the materials assigned. The instructor looks at the materials as well as at the learner in an attempt to match the learner's reading ability with the reading level of the resources (see also Article 6).

Assessment of study skills and content area reading provides important information for planning instruction. It is usually developed by the instructor, who (a) determines goals, (b) identifies specific skills required for achievement of these goals, and (c) designs assessment items from actual course materials to obtain the required information.

A number of sample assessment formats are presented in the following examples. They are very generally oriented, but the approach can be adapted to any content area.

EXAMPLE 2:
STUDY SKILLS ASSESSMENT

Purpose

Assess learner's knowledge of, and ability to use, the various resources available for learning in the content area.

Format

Design typical study-reading tasks by which to assess the learner's ability to use textbook aids and other resources.

1. Textbook Aids
   - table of contents
   - index
   - pictorial information, graphs, charts, tables
   - chapter introduction and summary
   - glossary
   - other pertinent aids
2. Other Resources
   - microfiche or card catalogue
   - reader's guide to periodicals
   - encyclopedias
   - other pertinent aids

Sample Items

1. Textbook Aids

   Use your textbook or your previous knowledge to answer the following questions.

   - Where would you look to find out how this text is organized?
   - On what page would you look to find information on starfish?
   - Using the temperature graph on page 123, advise tourists to Vancouver what clothing to bring in July.
   - What is the best use of the question at the end of each chapter?
   - Where would you look to find a list of definitions?

2. Other Resources

Use any appropriate resources to answer the following questions.

- What library guide would aid you in locating a book on the history of Vancouver's Gastown?
- What inforamtion about a book do you need to find it on the card catalogue or the microfiche?
- How would you find any recent articles on the use of solar energy?

EXAMPLE 3:
VOCABULARY ASSESSMENT

Purpose

Assess learner's prior knowledge of content area vocabulary.

Format

Construct vocabulary items that require the learner to demonstrate understanding of

- word structure: roots, prefixes, suffixes
- meanings in context
- dictionary definitions
- familiarity with words
- synonyms, antonyms, homonyms
- comparisons, generalizations, classifications
- eliminations, selections
- puzzles

Sample Items

For each of the words listed, underline the root and list three to five words that have the same **root**.

- bicycle
- telephone
- kilometre
- digital

For each of the words listed, underline the root and list three to five words that have the same **prefix**.

- submarine
- pedal
- transport
- circumference

The words underlined in the following sentences are taken from your textbook. Define each underlined word according to the way it is used in the sentence.

- The total payment for principal, interest, and taxes should not exceed thirty percent of take home pay.
- Ecology has become a subject of increased concern over the past twenty years.

Use the dictionary to select the best definition for the underlined words in each sentence.

- A calculator is useful when computing large figures.
- Writers structure their work according to some logical plan.

The following words are important to this course. Rate **each** according to the following scale.

- I've never heard of it.
- I've heard of it but can't define it.
- I can define it if I hear it in a sentence.
- I know it. I can define it, and I can use it.

(List vocabulary from the subject area.)

Circle the words under each sentence that could be used in place of the underlined word. Be ready to explain why each is appropriate.

1. Materials and energy needed for life are abundant here.

scarce	great
plentiful	negligible
useful	useless

2. The desert rat adapts to these high temperatures by searching for food at night and staying in its burrow during the day.

appeals	changes
adjusts	applies
adopts	attends

3. These habitats are not always constant.

there	stable
pleasant	dormant
temporary	permanent

Here are five categories related to the biosphere and its habitats.

temperature	soil
light	oxygen
moisture	

Place each word from the following list into the category (or categories) to which it belongs.

acids	dry	nutrient-poor
air	energy	polar regions
breath	enriched	rain
Celsius	extreme	sand
clay	freezing	shade
cold	humus	snow
deserts	minerals	soak
dim	moderate	sun
drink	night	tropical
water		

Choose the one word in each group that does not relate to the others and should be excluded. Write it in the blank labeled "Exclude." In the blank labeled "General concept" write the concept that describes the remaining words.

1. oxygen
   carbon dioxide
   temperature
   food
   sun

   Exclude _____

   General concept _____

2. land
   forest
   air
   water

   Exclude _____

   General concept _____

3. oceans
   ponds
   springs
   streams
   lakes

   Exclude _____

   General concept _____

EXAMPLE 4:
BIOLOGY WORD PUZZLE[1]

Directions:

Using the clues at the bottom of the page, complete the spelling of each word.

1. _ _ _ _ _ _ S _
2. _ _ _ _ _ _ O _ _ _ _ _
3. _ _ _ U _ _ _ _ _ _
4. _ R _ _ _ _ _ _ _ _ _
5. _ _ _ _ C _ _ _ _ _ _ _
6. _ _ _ _ _ _ _ _ _ E _ _ _ _ _ _ _ _ _ _ _ _ _
7. _ _ _ _ _ _ S _ _ _
   _ _ _ _ _ _ _ _ _ _ _ _
8. _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ O _ _ _ _ _ _ _
9. F _ _ _
10. E _ _ _ _ _ _
11. _ _ N _ _ _ _ _ _ _
12. E _ _ _ _ _ _
13. _ R _ _ _ _ _
14. _ _ _ _ G _ _ _ _
15. _ _ Y _ _ _ _ _ _ _ _

1. Source of chemical energy in all animal cells
2. Plant energy source
3. Reaction involving gain of electrons
4. Conversion of organic acid
5. One place where reaction for liberation of energy takes place

6. Key substance which occurs in every living organism and cell
7. ADP
8. Technical name for a series of reactions that liberates the chemical energy necessary to make ADP and ATP
9. Source of energy
10. Necessary for synthesis of proteins
11. Term meaning the formation of a complex chemical compound by combining two or more simpler compounds
12. Released when glucose is oxidized
13. Living
14. Non-living
15. Oxidation in the absence of oxygen

EXAMPLE 5:
COMPREHENSION ASSESSMENT

Purpose:

Assess understanding of concepts and ideas.

Format:

Ask the learner to explain and apply key concepts. Use direct questions or cloze procedure (see Article 5) to assess learner understanding of

- main ideas
- outlines
- summary
- details
- Author's organization (e.g., comparison-contrast, cause-effect)
- implications and inferences
- applications of ideas

Sample Items:

- Read chapter 1 of your textbook. Summarize in your own words the main ideas.
- Complete an outline of the article entitled "The Population Bomb." The outline may take whatever form you choose.
- After reading the story of Robert Gourlay, list as many details as you can that describe life in Upper Canada.
- List the arguments for and against abortion in the article supplied.
- According to what you have read, in the chapter entitled "Marsupials" (pp. 77-90) how do the following pairs differ? In what way are they similar?

  kangaroos - dogs
  kangaroos - people
  kangaroos - opossums

- After completing the assigned readings, list the causes of (or results of) the War of 1812.
- What do you think the author meant when he spoke of the starts as being "loud with light"?
- Using the information you have learned about nutrition, and keeping in mind Canada's Food Guide, write out a meal plan for yourself for the next week.

References

[1] Judith Thelen, *Improving Reading in Science* (Newark, Del.: International Reading Association, 1976. Reprinted by permission of the publisher.

Resources

British Columbia. Ministry of Education. Continuing Education Division. *ABE English and Communications Curriculum Guide*. Victoria, B.C.: Queen's Printer, 1982. ($5.00)

——— . *Reading Development: A Resource Book for Adult Basic Education*. Victoria, B.C.: Queen's Printer, 1982. ($2.00)

Christ, Frank K. *SR/SE Survey of Reading/Study Efficiency*. Chicago, Ill.: Science Research Associates, 1968.

Dale, Edgar, J. O'Rourke and H.A. Bamman. *Techniques of Teaching Vocabulary*. Palo Alto, California: Field Educational Publications, 1971.

Dupuis, Mary M., and Sandra L. Snyder, "Develop Concepts through Vocabulary: A Strategy for Reading Specialists to use with Content Teachers." *Journal of Reading*, 26 (January 1983), pp. 297-305.

Hansell, T. Sevenson. "Informal Diagnosis of Content Area Reading Skills." *Approaches to the Informal Evaluation of Reading*. Ed. John J. Pikulski and Timothy Shanahan. Newark, Del.: International Reading Association, 1982.

Herber, Harold L. *Teaching Reading in Content Areas*. 2nd ed. Englewood Cliffs, N.J.: Prentice-Hall, 1978.

Laffey, James L. *Reading in the Content Areas*. Newark, Del.: International Reading Association, 1972.

Readance, John E., Thomas W. Bean and R. Scott Baldwin. *Content Area Reading: An Integrated Approach*. Dubuque, Iowa: Kendell-Hunt, 1981.

Waters, Louise B. *Occupational Reading*. Belmont, Calif.: Wadsworth, 1982.

5. WAYS TO ASSESS COMPREHENSION

STANDARDIZED TESTS

A standardized test is one that has been designed (and usually published) to provide a controlled sample of a person's performance under uniform conditions of administration, scoring, and interpretation. It is constructed systematically by test specialists concerned with meeting rigorous statistical standards of validity and reliability. A major goal of standardized tests is to provide an efficient means of comparison between an individual's performance and the average performance of some other representative group (the "norm" group). By giving the test to very large numbers of people in a number of geographic areas, the developers establish the "norms" that appear in the test manual.

Most standardized tests are "survey" tests. That is, they survey the general achievement level in a broad area such as "Reading Comprehension" or "Vocabulary." Only a few of these tests provide finer information of a diagnostic nature (i.e., analysing strengths and weaknesses in specific skills). Thus, the major value of standardized tests is that they provide a relatively economical way of estimating, along with other information, the general achievement level of a student or group. For more specific indications of competence in specific areas, the instructor will have to look elsewhere, and probably to more "informal" approaches such as those described in the next section in this article.

This section of this article indicates some of the strengths and limitations of standardized tests in general, and of reading comprehension tests in particular. A set of guidelines is presented to help instructors choose an appropriate test. These are followed by brief descriptions of some standardized tests in current use in ABE programs, with information on how to obtain them. The section concludes with a list of reminders for test administration.

Strengths and Limitations

Standardized tests are objective measures designed by subject specialists. The reading selection and the tasks related to them are established independently from any one instructor's bias or preference. Anyone using a standardized test has to decide on the value of this objectivity. There is probably a place for it, as well as for the certain type of "external standard" that is inherent in the norms tables. There are circumstances when it is informative to compare a group's performance with that of some other "outside" group. Ease of administration and standard scoring procedures are also to be considered as potential benefits, especially if one is required to establish general competence levels of large groups of students. Such use would probably best be limited to initial placement assessment for large intakes, and for such special purposes as evaluation of a reading program.

The validity and reliability of standardized tests may also recommend them. Reading comprehension, still a difficult competence to define and isolate, is usually measured by providing passages to be read silently, after which a number of "skill-testing questions" are presented — probably in multiple-choice format. The test will have a strong degree of **validity** if the underlying approach to comprehension, and the style and content of the passages, is reasonably similar to that adopted by the instructor. The concept of **reliability** refers to the potential of the test to yield consistent information, in this case about a person's apparent ability to comprehend text. The manuals accompanying standardized tests should provide clear information about validity and reliabiltiy, and should be consulted as a matter of course by instructors considering the use of such tests. The aim is to see how closely the test developers' idea of what comprehension is, and how it can be measured, matches one's own perception.

A number of limitations of standardized reading tests have generally been recognized and have been discussed at length in the field. The limitations include (1) inappropriate norm groups (i.e., groups too different from the local ABE class for valid comparisons to be made); (2) the anxiety and artificiality of rigid procedures, especially time-limits; (3) the effect of content on comprehension, especially the factor of the relevance to adults of the content of these tests, which are most often developed for schools; (4) the multiple-choice format for answers to comprehension questions, almost essential for standardization procedures, but hardly reflective of real-life reading behavior (5) the types of comprehension questions asked, typically emphasizing only factual recall, and sometimes answerable even without reference to the test passage; and (6) the misleading nature of "grade-level" scores, which are extremely generalized measures, especially in the context of adult reading.

Standardized Tests: Which Ones to Use?

Some Ways NOT to Go About It:

1. Use the only one in the filing cabinet.
2. Use the one that's "always been used" because it's always been used.
3. Use the one that has the most elaborate technical manual, with impressive norms and tables and correlation coefficients.
4. Use the one that another instructor says works for her, because it works for her.
5. Use the one that looks easiest to give, can be given in a fifty-minute class period, and has a neat answer sheet that "scores itself."
6. Use the one that says it tests what you want to test.

Some of these reasons are very tempting, and some of them can be valid, but each merits further examination.

A Better Way to Make the Choice:

1. Decide exactly what information you want from the test, and what you will do with the results.
2. Decide whether, in order to get this information, you need to use a standardized test, an informal assessment, both, or neither.
3. If you have decided **against** a standardized test, you might consider informal assessment.
4. How important is it for you and your students to use a test designed specifically for adults?
5. Try to find out about the alternative published tests. Read some books and articles about tests; ask a fellow teacher or counsellor familiar with testing; contact a specialist in a university or government department who is supposed to know; or write to the publisher of a known test for a "sample set" (including the technical manual).
6. Try the test out on yourself. Can you anticipate how your adult students will react to it?
7. Does this test do the job? Check your answer to point number one on this list. Will this test yield the information you need? Will the results fit your purpose(s)? How will students benefit from the test?

Standardized Reading Comprehension Tests

The following standardized reading tests contain comprehension sub-tests and are used fairly widely in ABE programs. Full descriptions, technical data, and current prices may be obtained by writing, on institutional letterhead, to the publisher. Critical reviews of the tests are to be found in Buros' *Mental Measurement Yearbook*, or in other sources indicated below. The importance of careful reading of the test manual cannot be over-emphasized if one is to use any of these tests to advantage. It should be noted, for instance, that only two of these tests, the *ABLE* and the *Industrial Reading Test*, have been designed specifically for use with adult readers.

- Available from the Guidance Centre, Faculty of Education, University of Toronto, 371 Bloor Street West, Toronto, Ontario M5S 2R7 (free catalogue available — specimen sets at low cost):

  Adult Basic Learning Examination (1974)

  Industrial Reading Test (1977)

  Stanford Diagnostic Reading Test (1976)

- Available from publishers as indicated — catalogues free, specimen sets at low cost:

  Canadian Achievement Test (1982). McGraw-Hill Ryerson, 330 Progress Avenue, Scarborough, Ontario M1P 2Z5

  Gates-MacGinitie Reading Test, Canadian Edition (1979). Nelson, 1120 Birchmount Road, Scarborough, Ontario M1K 5G4

  GED Practice Test, Canadian Edition (1981). Allyn and Bacon, 791 St. Clair Avenue West, Toronto, Ontario M6C 1B8

  Nelson Reading Test and *Nelson-Denny Reading Test* (1976). Houghton Mifflin, 150 Steelcase Road West, Markham, Ontario L3R 1B2

  Test of Adult Basic Education (TABE 1976). McGraw-Hill Ryerson, 330 Progress Avenue, Scarborough, Ontario M1P 2Z5

Giving a Standardized Test — A List of Reminders

Before the Test:

- Be completely familiar with all test materials, especially the manual. Try it yourself.
- Ensure a quiet, comfortable atmosphere, free from disturbances.
- Ensure adequate time available (and if test is a timed one, be sure that students can see a clock).
- Have extra copies of materials and pencils available.
- Check that students understand what they have to do.
- Let students know what will happen to the results and how they will get feedback on their performance.

During the Test:

- Especially at the beginning, move quietly around to see that students are following directions.
- Give all directions clearly and in accordance with the manual.

After the Test:

- Keep the tests and the response sheets in a secure place (locked).
- Provide students with appropriate reporting and interpretation of results.
- Don't go over the test if you ever want to use it again.

INFORMAL APPROACHES

An informal assessment or test is any sample of a person's performance that is not "standardized" in the strict sense of the word. Thus, the test objectives and the performance tasks may vary from person to person, group to group, location to location. The environment of testing, including seating, time limits, and similar restrictions, is likely to be flexible. The performance of the student will probably be evaluated in terms of a particular learning objective rather than in comparison with a norm group or a provincial average. Even the tone and quality of interaction between the instructor and student will probably be more relaxed and sensitive to adjustment. It is an approach to testing that appears eminently suitable for the assessment of reading in adult basic education. It is also one that is widely used.

It is not suggested that ABE instructors completely abandon standardized tests, or even formal procedures, for certain situations. Tests such as a "ball-park" initial placement for larger groups of students, or a periodic college-wide assessment to compare general levels of achievement, may still have a useful place in a program — and that is to mention only two of the many possible appropriate uses.

Informal tests, however, generally provide much more specific information about the reader's strengths, weaknesses, and avenues to improvement. The outcome and interpretation of the reader's performance is often immediate and shareable in a non-threatening way between instructor and student. Plans for the next steps in learning can be made almost on the spot, although changes can still be made in light of later assessments.

Because of their nature, informal tests are often produced locally by instructors. This enables a close correspondence to be made between, first, the materials of assessment and the materials of instruction, and, secondly, between the objectives and emphasis of assessment and instruction. This close match fosters a very useful form of validity — curricular validity. It is one of the major strengths of the informal approach.

Moreover, "locally-produced" informal tests do not require instructors to burn the midnight oil in labors of imaginative test specification, construction, and validation. Almost any reading materials can be used, including newspapers and magazines, textbooks from any content area, business letters, technical reports, and even government brochures or roadmaps. Some parts of commercial test materials may well be appropriate. The final choice of materials and the tasks required of the reader will, of course, be shaped by the particular purpose in testing, and by what the instructor plans to do with the results.

The why, when, and how of informal reading tests are summarized below, and four examples of informal approaches are given: (1) the Try-out, (2) the Group Reading Inventory, (3) the Individual Reading Inventory, and (4) Twenty Minutes with a Newspaper. The final section of this article deals in more detail with the Cloze Technique, an increasingly popular approach to assessment, especially with ESL-background students.

Informal Reading Test — The Basics

So Why Do It?

Through informal reading tests, instructor **and** student get a better idea of present level of skills (e.g., comprehension, vocabulary, study skills) and can set goals for the immediate future. Informal tests can also be used to check on progress.

When to Do It?

Informal reading tests should be given at any convenient time before, during, or after the course. They can be designed for any period from five minutes to an hour. They can even be split up and given over two or three meetings.

How to Do It?

1. Decide what information you want from the test and what you will do with results.
2. Select specific skills or abilities to check.
3. Decide (a) what the student is to do; (b) the conditions (e.g., how much time, with or without a dictionary, reading silently or to someone else); and (c) how you will use the results to plan instruction.
4. Choose materials that are suitable for, or can be adapted to, this purpose. Almost anything from newspaper stories to selections from textbooks or novels can be used; try to pick the best for the purpose. Consider such points as the interest and readability level of the passages (see Article 6). Consider also the possibility of using the same format, with different but similar materials, as a post-test later in the course.
5. Before you give the test to the student, ask yourself (and maybe others) whether the reader will have a reasonable chance of success.
6. At the beginning, briefly explain the purpose of the test to the student. Afterwards, share the results. Explain how it helps **you** to plan the next steps in learning.

EXAMPLE 1: THE TRY-OUT

This is an effective adaptation of the old "shell game." The student looks between the covers of three books, each at a different level of difficulty, to find the materials that can be read and understood without frustration. The assessment is based on the belief that adults have a fairly accurate idea of what they can read, understand, and learn from. It may be used in any subject area.

Procedures:

1. The instructor selects three books at different known levels of difficulty. These may be novels, textbooks, workbooks, articles, short stories, or "everyday materials" such as magazines. (See Article 6 of this book for ways to estimate text readability.)
2. The reader is given plenty of time (up to an hour) to browse through each of the books, decide which one seems to be at the right level. This becomes the starting level for individual work: adjustments up, down, or across (e.g., same level, different interest) can be made as the course progresses.

EXAMPLE 2:
THE GROUP READING INVENTORY

This requires a little more preparation, but it has two advantages:

- It can be given to a whole ABE class as a group, **or** it can be used individually (say for a new student);
- Once prepared, it can be used on later occasions.

Procedure:

1. The instructor selects from readers or workbooks used in the course about four reading passages at different levels of difficulty. The passages should be (a) at least 250 words long; (b) of adult interest; (c) not unduly technical or literary; and (d) have content that can be used for comprehension questions. The passages are photo-copied (**without** pictures) and stapled together.
2. The instructor provides, at the end of each passage, a set of at least five comprehension questions. These should include questions on main idea, detail, inference, and vocabulary. The questions may be multiple choice, true/false, or open-ended (caution: try to avoid written answers, if you want information about reading ability).
3. After reviewing the results, the instructor (and the student) has a rough idea of which students can comprehend what level of material, and on this basis the instructor chooses an instructional plan accordingly. Adjustments are made as the course progresses and student abilities become better known.

Materials:

Select from instructional materials available for the course (not necessarily workbooks). Assess carefully the different levels of difficulty. Most GED preparation texts, for example, have sample comprehension passages **and** exercises; some are more difficult than others. (For suggestions on estimating text readability, see Article 6.)

EXAMPLE 3: THE INDIVIDUAL READING INVENTORY (IRI)

This requires the most time but yields the most information. A comprehensive overview of a person's reading ability can be obtained through an individual reading inventory, which may include separate assessments of sight word recognition, word analysis skills, (silent) reading comprehension, and study and reference skills.

Typically, the inventory is instructor-made and is given on a one-to-one basis in a single session or over several sessions. Format is flexible and adaptable to specific student needs and interests. Its purpose is to establish appropriate levels for instruction in reading and for free (independent) reading. The IRI is for individual assessment, **not** for comparison with others.

Some carefully structured IRI's have been published commercially, including one that includes an (elementary) adult form (Silvaroli, 1982). Instructors will find them of value only as general models of how an IRI "looks." It is unlikely that the content of a published IRI will match the local instructional materials (especially the adult emphasis). Instructors who plan to make up their own inventory should find the following hints, as well as the resources listed at the end of this article, helpful.

Format:

The two most common parts of the IRI as used in classroom practice are

- observation of **Word Identification Skills**, primarily sight word recognition and word analysis;
- observation of **Reading in Context**.

These may be supplemented by individual assessments of study and reference skills, spelling, attitudes towards reading, topics of reading interest, simple mini-lessons to see how a student goes about learning, "tryout" selections of books to read or study (see Example 1), etc.

Content:

The main asset of the IRI approach for adults is that the content of the assessment can be varied to match the needs and interests of the person and the instructional program. Material from any adult reading (newspapers, novels, or textbooks) can be used in the original or can be photocopied.

Word Identification Skills:

Sight word recognition is usually tested by a series of word lists of gradually increasing difficulty. Each list should comprise between ten and twenty words. The words are selected from passages in materials at different levels of difficulty; they should be representative words and should include different parts of speech. No more than six lists should be presented in a testing session.

The reader is asked to say the words aloud, starting with the easiest list. If "automatic" recognition is to be simulated, the words should be exposed one at a time (e.g., by the reader drawing a 3 x 5 card progressively down the page). Words not instantly recognized can be given additional attention, and the reader's strategies of **word analysis** can be observed. While comprehension is not strictly a test objective in this situation, students usually tell you which words they don't "know."

An advantage of using the word lists at the beginning of an IRI is that the instructor can get a quick estimate of the reader's comprehension level. This can be used to select the levels of reading passages that will be used in the "Reading in Context" section that follows.

Rule-of-thumb cut-off range for graduated word list tests is is 70 to 90 percent. Above this range, the lists are "too easy," and scores of 60 and below indicate possible frustration.

A useful variant of the word list test is the ZIP Scale (Cramer and Dorsey, 1979), a set of graded word lists with a difference: the reader is required to first recognize the word and then to select a word opposite in meaning (i.e., a check on comprehension). This test can be given also as a silent group test, which is a distinct advantage. Again, instructors might want to try making up their own "word opposites" test.

Reading in Context:

Reading consists of much more than recognizing or decoding words one at a time. Continuous reading passages enable us to observe more about how a person goes about reading. A common procedure is as follows.

1. Select passages of about 250 words from interesting adult materials at increasing levels of difficulty. Readability level should be checked (see Article 6). Do **not** show readability level on student copy: it's distracting and possibly misleading.

2. Make up **in advance** five to ten comprehension questions for each passage. These should include main idea; key details; inferences; and possibly sequence, cause, and effect; vocabulary checks; and application or speculation beyond the text itself (e.g., "What if . . ." or "What might happen next?").

Avoid questions with answers, and those that could be answered without even reading the passage. Try to ask questions that may indicate how much **meaning** readers have brought to the text from their own "world knowledge."

3. Start with a passage that you expect the student may be able to read with few or no errors and can understand well. The word identification test should help you estimate this — a rule of thumb is to drop **two** levels below the 80% score level on the word lists.

   Give the student the passage with a brief explanation of what it's about and some **purpose** for the reading (e.g., "Read to find out . . .").

   Ask the student to read the passage **silently**, and explain that afterwards you'll ask to have the story retold in a few words. Then maybe ask a few questions on it.

   Comprehension should **always** be assessed first by silent reading. It's the way people normally read.

4. During the silent reading you may want to make a note of the time taken, but only if you can do this unobtrusively (**not** by a noisy stop watch). Reading rate can give an indication of fluency.

5. When the reader is finished, ask, "Can you give me in your own words the general idea of what you have read?" Follow up with some of your comprehension questions that may not have been answered already. Estimate the overall level of comprehension. If it is still reasonably high (see **Standards** below), carry on to the next higher level.

6. **Oral Reading** of a passage, at or about the instructional level, may, however, provide additional information about:

   - word recognition in context;
   - word identification by phonic analysis combined with context;
   - word identification by structural analysis in context;
   - self-correction of "miscues";
   - attitude of a reader to the sense (or lack of sense) in what is read;
   - insertions, omissions, reversals, phrasing;
   - many other aspects of the reading process.

   Most instructors find it advisable to have an extra copy of the reading passages so that they can follow and write notes on it as the student reads.

7. Other information of value can be obtained through variations of this procedure. Not all can be planned in advance.

8. Avoid fatigue (to either of you).

Standards:

Standards for reading comprehension in informal reading inventories are themselves somewhat informal. Usually three "levels" are estimated.

- **Independent Level:** At this level a person can read fluently with virtually no help from others, with few vocabulary difficulties, and with high comprehension. Recreational reading is typically chosen from materials of this nature. Comprehension is estimated at 90 percent and over, with no more than one word in 100 unknown.
- **Instructional Level:** Material at this level is challenging but is not frustrating for a person to read successfully with normal instructional support. Typically, most reading for development of skills and strategies will be selected from texts of this type. Comprehension is estimated at 70 to 90 percent with no more than five words in one hundred presenting difficulty.
- **Frustration Level:** On materials of this difficulty, the reader (if still reading at all) will encounter considerable problems in word identification and passage comprehension. Tension and anxiety will often be apparent. Comprehension is estimated at only 50 percent or less, with many key words not known.

EXAMPLE 4: TWENTY MINUTES WITH A NEWSPAPER

Purpose:

To use any locally available newspaper to observe adults, at various levels of reading ability, in a common reading task, and to estimate approximate levels of reading comprehension.

Advantages of Newspaper:

It is readily available; low cost; non-threatening; real-life; doesn't look like a test; of interest to adults; contains a wide range of reading levels and a wide range of print sizes and type faces; contains sight words in large and small print; and contains pictures, cartoons (in sequence), and other graphics.

Selection Guide:

Use a local paper (for interest and increased possibility of reader bringing own knowledge to reading task). It should contain photographs (for interpretation, inference, and prediction) and must have large print headlines (in case a person is at a low literacy level), large display ads with and without context clues (e.g., grocery supermarket flyer with illustration), other display ads without pictures, and might also include a magazine section.

Procedure:

The whole task is to be done with complete informality and should last only about twenty minutes. This is just a rough screening of ability and is designed to get a quick idea of the **level** of materials that might be used in further assessment. The order of the tasks is flexible and should be adjusted according to how things are going.

1. Hand the person a folded newspaper, complete with any supplements. Say, "Here's a local newspaper. Would you like to have a look over it and tell me what kind of things you can read in it?"

   Check for

   - handling of paper;
   - handling of sections;
   - systematic or random approach; and
   - level of anxiety.

2. Observe what the reader chooses. Allow free choice at first, then gently lead in the direction of tasks such as these:

   - sight words in large print (headlines);
   - sight words in ads with pictures;
   - sight words in ads without clues (e.g., job ads);
   - headlines in capital letters;
   - headlines in upper and lower case;
   - tries at reading an entire story (note selection process);
   - can read whole story silently and tell you about it;
   - pictures (ask to describe what story probably about);
   - cartoons (check for sequence retelling in comic strips and for inferences in political cartoons).

3. Direct the reader to other parts of the paper.

   Choose a sample of tasks from the low, intermediate, or upper levels of reading competence. Let your observations and conclusions from the previous part of the test (Items 1 and 2) guide your choice.

   - **Low Level:**

     Can the reader follow directions?
     What is smallest size of print that can be read?
     Check sample of capital letters.
     Check sample of small letters.

     Chosing from the size and type of print at which he or she is comfortable, the reader finds words that begin with the same sound as his or her first name or surname and points to or circles them if unable to read them aloud.

     Try a headline in which some of the words are known. How would this reader go about puzzling out the rest of the words? What clues are used? Give encouraging responses such as "Great! How did you work it out?" or "OK! What did you try? Where did you have to give up?"

   - **Intermediate Level:**

     Pick a short article with a meaningful headline and an accompanying picture or a picture with other information in the caption that adds meaning to the story. Have the person read it silently and then tell you about it. Check for main idea, details, inferences, sequence, etc., depending on the nature of the story. How well does the reader use "world knowledge" to maximize comprehension?

- **Upper Levels:**

  Ask about the student's major areas of interest (e.g., sports, world news, local news, features, editorials). Ask the person to read silently the whole of any article that seems interesting. Check for main idea and relevant details. Discuss associations, speculation beyond the text, and the appreciation of bias, style, and diction.

4. Share your observations about this informal assessment. Be positive. Explain how the information will help you plan a program of reading improvement (or whatever other outcomes are appropriate).

CLOZE PROCEDURE

One informal evaluation tool that can be adapted for diagnostic purposes with any reading material is the cloze procedure. It provides a simple technique for assessing the learner's comprehension of a passage and for determining whether a text is written at an instructional level suitable for the learner. See how well you can handle this piece of "cloze":

> Cloze procedure involves selecting _____ from the text-book, deleting _____ fifth word, and asking _____ to fill in the_____ with the exact word _____ by the author. Thus _____ instructor can get an_____ picture of how well _____ reader has comprehended the _____ .

To identify the correct deletions, readers must relate the whole to the part and the part to the whole. They depend on their insights into the relations between ideas, using clues of meaning and grammatical structure as well as sound-symbol relationships in doing so.

As an informal evaluation tool, the cloze procedure has several characteristics that make it useful to instructors of reading and content areas alike:

- it can be used in both group and individual situations;
- although some published materials are available, it can be constructed from classroom materials by instructors;
- it judges learner performance by predetermined (criterion-based) standards rather than by normative standards;
- it can provide information helpful in making decisions about learners and about programs.

Although cloze was originally intended as a technique for assessing readability, its uses have expanded to include both evaluation and instruction. This section of Article 5 concentrates on its use as a tool for the informal assessment of reading ability.

Uses of Cloze for Assessment

The assessment of readability of material:

While all measures of readability are subject to certain limitations, they may provide at least an estimate of difficulty that can be useful in selecting materials. As an alternative to a readability formula, which is generally restricted to measures of word difficulty and sentence complexity, cloze measures factors such as the background experience of the reader for that particular passage, an unusual meaning for a common word, an awkward and confusing sentence structure, or the use of illustrations.

Cloze permits direct assessment of the interaction of readers with reading materials by indicating how well readers can handle that particular material, as well as material similar to it. The procedure allows passages and books to be ranked from easiest to most difficult, although it does not provide specific grade level scores.

The assessment of reading ability, particularly comprehension:

The rationale for using cloze as a measure of comprehension is that the reader who understands the structure and content of a written passage should be able to supply the missing words correctly. As a measure of reading ability, cloze can be used for placement purposes. By selecting and administering passages of several levels from materials being considered for instructional use, it is possible to estimate a reader's independent, instructional, and frustrational level.

Cloze can also be used to determine the extent of background knowledge learners possess about a topic and to find out if they are capable of making connections between ideas as they use the clues found on the page. The information gathered may be part of a full informal inventory or, when used alone, may yield very useful preliminary data.

Theoretical Base

The term "cloze," coined in 1953 by Wilson Taylor,[1] is based on the psychological principle of closure and the linguistic concept of redundancy within the English language. Closure refers to the human tendency to perceive things as wholes, even if parts are missing. Since one's goal is to achieve meaning, the reader fills in the gaps using previously learned and stored information. Redundancy in writing provides the reader with many clues as to what is coming next. Goodman,[2] who refers to reading as a "psycholinguistic guessing game," recognizes three sources of information or cueing systems necessary for obtaining meaning from the page:

- Graphophonic cues — relationships between sounds and symbols of a language.
- Syntactic cues — evidence from the rules and patterns of language and from its grammatical structure.
- Semantic cues — evidence from the general sense or meaning.

By using these cueing systems, readers are able to anticipate meaning from the context.

Procedures

The format that cloze takes will vary depending on the purposes for which an assessment is designed.

Cloze construction:

1. Select a passage of about 250 to 300 words from appropriate instructional material.
2. Leave the first sentence intact.
3. Select at random one of the first five words in the second sentence. Delete this word and every subsequent fifth word until you have fifty deletions. Replace each deletion wtih an underlined blank fifteen typewriter spaces long. Each blank must be the same length.
4. Finish the sentence in which the fiftieth deletion occurs. Type one more sentence intact.

Cloze administration and scoring: Since cloze is more difficult for learners not familiar with this form of assessment, it is important to explain the purpose of the test, providing one or two similar examples. Learners are requested to read the passage over first and then to fill in all blanks, one word per blank, by using the clues supplied by the context. Time limits should not be imposed.

Scoring is easy. Research indicates that scores obtained by counting **exact** replacements, and not synonyms, more often yield valid scores. Practice confirms that accepting only exact responses avoids the problem of trying to judge the appropriateness of a variety of synonyms (and helps to preserve the instructor's sanity). Spelling should not influence the score. The total number of exact reproductions multiplied by two will yield a percentage score that can be evaluated according to the following criteria:

- Independent reading level — above 60 percent;
- Instructional reading level — between 40 and 60 percent;
- Frustration reading level — below 40 percent.

Any variations from the standard procedures (every fifth word deleted and only exact replacements scored as correct) will invalidate the results. It is important to remember that a particular score is truly valid only for the specific material from which the sample is taken.

Variations on Cloze Procedure: The cloze technique can be modified in a variety of ways to change its diagnostic purpose. Here are eight possible variations.

1. Delete every nth say 8th or 10th, for difficult materials. Be sure to leave first and last sentences intact.
2. Delete particular categories of words: nouns, verbs, modifiers, articles, conjunctions, etc. to assess grammatical knowledge.
3. Delete parts of words, leaving initial consonant, prefix, etc. as clues.
4. Use the "maze technique" (i.e., offer a selection of three synonyms from which to fill each blank).[3]
5. Use the "limited cloze" technique (i.e., offer a list of deleted words, and possibly synonyms, from which to fill all blanks).[4]
6. Analyse the synonyms that learners use as replacements for deletions. If the selection is from a specific content area, the replacements will reveal much about a reader's understanding.
7. Plan a discussion with learners to determine which cues (graphophonic, syntactic, semantic) they used and why.
8. Delete words on a rational basis (e.g., all words relating to key concepts) to assess a reader's comprehension of a subject area.

Strictly speaking, these modifications change the nature of the test, making the "cloze comprehension criteria" invalid. However, these approaches can be very valuable as diagnostic tools to provide an instructor with a better understanding of a learner's reading process.

Strengths and Limitations: While relative strengths and weaknesses will vary with the purpose and type of cloze procedure used, the cloze procedure has the following strengths:

1. It is easy to construct, administer and score;
2. It is applicable to a variety of classroom materials and situations: mathematics, science, ESL, ABE;
3. It is suitable for group or individual use;
4. It offers guidance in matching readers and materials;

5. It provides a good measurement of readers' ability to use context clues (semantic and syntactic cues in particular);
6. It is supported by considerable research on its reliability and validity.

Cloze procedure also has a number of limitations:

1. It provides only limited diagnostic information;
2. It may require considerable time to prepare sufficient suitable passages for the larger range of reading levels found among any group of adults;
3. A learner might feel frustrated if a word selected for a "blank" is appropriate but not the exact one used by the writer;
4. Certain categories of deletion such as articles or nouns may offer more clues to comprehension than others (such as modifiers);
5. Results are influenced by readers' familiarity with the content of the passage and their general language ability.

In summary, it seems apparent that the cloze procedure is an approach to the informal evaluation of reading ability that can be adapted to suit a number of purposes. It is an effective evaluation tool for looking at the interaction of the reader and the writer. It is particularly useful when evaluating readers' ability to cope with specific passages from virtually any type or level of material.

On the next pages are three illustrations of the variety and adaptability of cloze procedure to Mathematics (Example 5), Science (Example 6), and General Education (Example 7).

NOTE: The words omitted from the second paragraph of this section of Article 5 are **passages**, **every**, **learners**, **blank**, **used**, **the**, **accurate**, **the**, **passage**.

EXAMPLE 5:
MATHEMATICS CLOZE TEST

Directions:

First, read quickly through this passage. Then fill in each blank with the word you think is missing.

Compound interest occurs when interest is earned on a sum of money and instead of being taken out and used for other purposes, the interest is left in and added to the original sum. Now this larger sum _____ interest which is in_____ added to it to_____ an even bigger sum_____ again will earn interest, ____ so on. Thus the_____ is fed back into _____ principal, making a larger _____ larger sum to earn_____ on. It's like the_____ snowball that starts at_____ top of a hill_____ get bigger and bigger_____ it rolls down.

Interest _____ be calculated at different _____ over the year: monthly, _____, semi-annually, annually. Some credit _____ savings accounts are now _____ interest every day. The _____ times a year the _____ is calculated, the faster _____ sum will increase because _____ sooner the interest is _____ and added to the _____ , the sooner that interest _____ itself start earning interest.

Compound Interest Formula:

Compound Interest = $(1 + i)^n$

where n = total number of times the interest is compounded or turned over

i = interest for the turnover period expressed as a decimal

This formula represents the _____ $1 will accumulate_____ at an interest rate (_____) for n compounding periods. _____ difficult part of this _____ is the i. The _____ is that the interest_____ given as a yearly _____ and you must change_____ to the amount of _____ for the compounding period. _____ example:

— if 10% interest is _____ quarterly, (4 times a_____) then the interest for_____ compounding period (i) is 10 divided by 4 = 2½% = .025

— if 8% _____ is compounded semi-annually (_____ a year), the interest _____ the turnover period (i) is 8 divided by 2 = 4% = .04

The amount that $1_____ accumulate to is proportional _____ what $5 or $10 _____ $100 or any amount_____ accumulate to at the_____ interest rate over the _____ number of compounding periods. _____ at 7% compounded semi-annually _____ accumulate to 5 times the amount $1 accumulates to; $10 will accumulate to 10 times the amount $1 accumulates to, and so on. Thus the formula for what any amount will accumulate to is:

— $S = P(1 + i)^n$

where S = accumulated amount, P = principal, or sum invested at the beginning, i = interest rate, and n = total number of turnover periods.

SOURCE: *VAST 4 Mathematics*, Unit 7.

EXAMPLE 6:
SCIENCE CLOZE TEST

Directions:

First, read quickly through this passage. Then, fill in each blank with the word you think is missing.

Individual organisms live and die but populations of organisms exist for ages. The continuity of life _____ upon reproduction by which _____ traits are passed to _____ next generation. Individual offspring _____ resemble their parents but _____ neither a carbon copy _____ an exact mixture of _____ .

A gene is a _____ of inheritance that affects _____ distinct characteristic of an _____ . In human beings there _____ genes that affect the _____ of your eyes, the _____ of your hair, the _____ of your fingers and _____ size of your brain. _____ the physical characteristics that _____ you from others are _____ result of a particular _____ of genes.

Inside every _____ human cell the genes _____ up to form 23 _____ of threadlike structures known _____ **chromosomes**. No one is _____ sure how many genes _____ in these 23 pairs _____ chromosomes, but some geneticists _____ that there are more _____ a billion in every _____ of every organism. The _____ and sperm carry only _____ of each of the _____ pairs of chromosomes. When _____ join, a new cell _____ formed with the

normal _____ of 46 chromosomes aligned _____ 23 pairs. In this _____ genes for each characteristic _____ donated by both the _____ and father and are _____ to form a new _____.

Each gene is a _____ sequence of molecules. Every _____ that the genes carry — _____ black hair, long legs, _____ eyes — comes from a _____ sequence of molecules, just _____ the meaning of a _____ comes from a particular _____ of words.

What gives the gene _____ messages is the chemical D.N.A. (deoxyribonucleic acid). DNA is a very long spiral molecule that is itself made up of distinctive sequences of four smaller molecules called nucleotides.

SOURCE: *VAST 4 Biology*, Unit 5

EXAMPLE 7:
GENERAL EDUCATION CLOZE TEST

Directions:

First, read quickly through this passage. Then, fill in each blank with the word you think is missing.

This section of the Workbook deals with the very real problems of finding a job.

There are no short _____ or easy formulae which _____ be used in finding _____ job. You must thoroughly _____ your skills, attitudes and _____. Much of the assessment _____ was presented earlier in _____ course. Now that you _____ the information you need, _____ is time to apply _____ to the task of _____ to meet employers.

You _____ walk up to an _____ and say, "I want_____ job!" This approach will _____ get you a job, _____ it will get you _____ quick "good-bye."

An employer _____ to know a great _____ about you — your training, _____, attitudes, and interests. After _____, s/he is going to _____ paying you to do _____ tasks. An employer wants _____ be as certain as _____ that s/he is going _____ get good value for _____ dollar paid to you.

_____ too, want to be _____ that you are being _____ a fair wage for _____ efforts. You also want _____ know about the employer's _____ and values. You will _____ to know about working _____ and fringe benefits.

A _____ is an activity that _____ about one-third of _____ working life, so it _____ be as rewarding and _____ as possible.

Here is _____ you will do in _____ balance of this course. _____ you will study yourself _____ assess your skills. Then _____ will locate job vacancies. _____ , you will examine job _____ — which to investigate and _____ to investigate them.

The preparation of a resume, letters of applications, and application forms is dealt with in three sections of the course. Finally, you will prepare for a job interview and learn how to conduct yourself during an interview.

SOURCE: *Planning Your Future,* page 53.

KEY TO EXAMPLES 5-7

Example 5 (Mathematics):

1. earns
2. turn
3. make
4. that
5. and
6. interest
7. the
8. and
9. interest
10. small
11. the
12. and
13. as
14. can
15. times
16. quarterly
17. union
18. compounding
19. more
20. interest
21. the
22. the
23. compounded
24. principal
25. can
26. amount
27. to
28. i
29. The
30. formula
31. problem
32. is
33. percentage
34. it
35. interest
36. For
37. compounded
38. year
39. the
40. interest
41. twice
42. for
43. will
44. to
45. or
46. will
47. same
48. same
49. $5
50. will

Example 6 (Science):

1. depends
2. inherited
3. the
4. may
5. are
6. nor
7. them
8. unit
9. a
10. organism
11. are
12. color
13. straightness
18. the
19. arrangement
20. normal
21. link
22. pairs
23. as
24. quite
25. are
26. of
27. estimate
28. than
29. cell
30. egg
35. complement
36. in
37. way
38. are
39. mother
40. combined
41. individual
42. distinctive
43. message
44. for
45. blue
46. particular
47. as

14. length
15. the
16. All
17. separate
31. one
32. 23
33. they
34. is
48. sentence
49. sequence
50. its

Example 7 (General):

1. cuts
2. can
3. a
4. assess
5. interests
6. process
7. the
8. have
9. it
10. it
11. preparing
12. cannot
13. employer
14. a
15. not
16. but
17. a
18. wants
19. deal
20. skills
21. all
22. be
23. certain
24. to
25. possible
26. to
27. every
28. You
29. certain
30. paid
31. your
32. to
33. attitudes
34. want
35. conditions
36. job
37. occupies
38. your
39. should
40. enjoyable
41. what
42. the
43. First
44. and
45. you
46. Next
47. prospects
48. how
49. preparation
50. of

References

[1] W.L. Taylor, "Cloze Procedure: A New Tool for Measuring Readability." *Journalism Quarterly*, 30 (Fall 1953), pp. 415-433.

[2] Kenneth S. Goodman, "Reading: A Psycholinguistic Guessing Game," *Journal of the Reading Specialist*, 4 (May 1967), pp. 126-135.

[3] J.T. Guthrie, et al., "The Maze Technique to Assess and Monitor Reading Comprehension," *Reading Teacher*, 28 (November 1974), pp. 161-168.

[4] J.W. Cunningham and P.M. Cunningham, "Validating a Limited-Cloze Proceudre," *Journal of Reading Behavior*, 10 (1978), pp. 211-213.

Resources

Standardized Tests:

Anderson, Beverly L., Richard J. Stiggins, and Suzanne B. Hiscox. *Guidelines for Selecting Basic Skills and Life Skills Tests.* Portland, Oregon: Northwest Regional Educational Laboratory, 1980.

British Columbia. Ministry of Education, Learning Assessment Branch. *Selection and Use of Standardized Tests.* Victoria: Queen's Printer, 1979. ($1.50)

Blanton, William, Roger Farr, and J. Jaap Tuinman, *Reading Tests for the Secondary Grades.* Newark, Del.: International Reading Association, 1972.

Buros, D.K., ed. *Mental Measurements Yearbooks.* Highland Park, N.J.: Gryphon Press, n.d.

Nafziger, Dean H., et al. *Tests of Adult Literacy: An Evaluation of Currently Available Instruments.* Portland, Oregon: Northwest Regional Educational Laboratory, 1975.

Schreiner, Robert, ed. *Reading Tests and Teachers: A Practical Guide.* Newark, Del.: International Reading Association, 1979.

Test reviews are also published regularly in the *Journal of Reading.* A wide selection of published tests is available for purchase or review from the Guidance Centre, Faculty of Education, University of Toronto, 1000 Yonge Street, Toronto, Ontario M4W 2K8. The annual *Guidance Centre Catalogue* (free on request) contains very useful annotations. Specimen sets of most tests are available at a small cost.

Informal Approaches:

Cramer, Ward and Suzanne Dorsey. *The ZIP Scale.* Portland, Maine: J. Weston Walch, 1979.

Johnson, Marjorie S. and Roy A. Kress. *Informal Reading Inventories.* Newark, Del.: International Reading Association, 1975.

Johnston, Peter H. *Reading Comprehension Assessment: A Cognitive Basis.* Newark, Del.: International Reading Association, 1983.

Pikulski, John J. and Timothy Shanahan, eds. *Approaches to the Informal Evaluation of Reading.* Newark, Del.: International Reading Association, 1982.

Silvaroli, Nicholas J. *Classroom Reading Inventory.* 4th ed. Dubuque, Iowa: Wm. C. Brown, 1982.

Cloze Procedure:

British Columbia. Ministry of Education. Continuing Education Division. *Planning Your Future.* Victoria: Queen's Printer, 1978.

——— . *VAST 4 Biology.* Victoria: Queen's Printer, 1977.

——— . *VAST 4 Mathematics.* Victoria: Queen's Printer, 1977.

Cunningham, J.W. and P.M. Cunningham. "Validating a Limited-Cloze Procedure." *Journal of Reading Behavior,* 10 (1978), pp. 211-213.

Earle, R.A. *Teaching Reading and Mathematics.* Newark, Del.: International Reading Association, 1976.

Goodman, Kenneth S. "Reading: A Psycholinguistic Guessing Game." *Journal of the Reading Specialist,* 4 (May 1967), pp. 126-135.

——— . "Behind the Eye: What Happens in Reading." In *Theoretical Models and Processes of Reading.* Ed. H. Singer and R.B. Ruddell. 2nd ed. Newark, Del.: International Reading Association, 1976.

Guthrie, J.T., et al. "The Maze Technique to Assess and Monitor Reading Comprehension." *Reading Teacher,* 28 (November 1974), pp. 161-168.

Pikulski, John J., and A.W. Tobin. "The Cloze Procedure as an Informal Assessment Technique." In *Approach to the Informal Evaluation of Reading.* Ed. J.J. Pikulski and T. Shanahan. Newark, Del.: International Reading Association, 1982, pp. 42-61.

Taylor, W.L. "Cloze Procedure: A New Tool for Measuring Readability." *Journalism Quarterly,* 30 (Fall 1953), pp. 415-433.

Thelen, Judith. *"Improving Reading in Science."* Newark, Del.: International Reading Association, 1976.

6. THE READABILITY OF TEXT

Readability is an indicator of the level of ease or difficulty with which a piece of continuous text may be read and understood. It is possible to estimate this level by means of taking samples from different parts of the text and using either one's professional judgment or one of several formulas developed for this purpose.

Knowing the readability of a passage may be useful in preparing informal reading assessments based on locally available materials such as magazines, textbooks, etc. For instructional planning, some idea of the readability level of material is essential for achieving a satisfactory "match" between reader ability and the materials of instruction.

Readability levels are usually estimated by (1) taking a number of samples of the text, (2) making some counts such as sentence length and the number of "difficult" words, (3) plugging these numbers into a formula or chart, which yields (4) an estimate of reading difficulty. Two examples of readability measures follow this article.

Example 1 features the Raygro Readability Estimate (1977), a similar approach to the well-known Fry Graph (1978), but simpler to use. Example 2 is a summary of the Gunning-Fog Index (1952), which has the merit of not requiring one to keep a graph within reach.

Cautions in the use of Readability Estimates

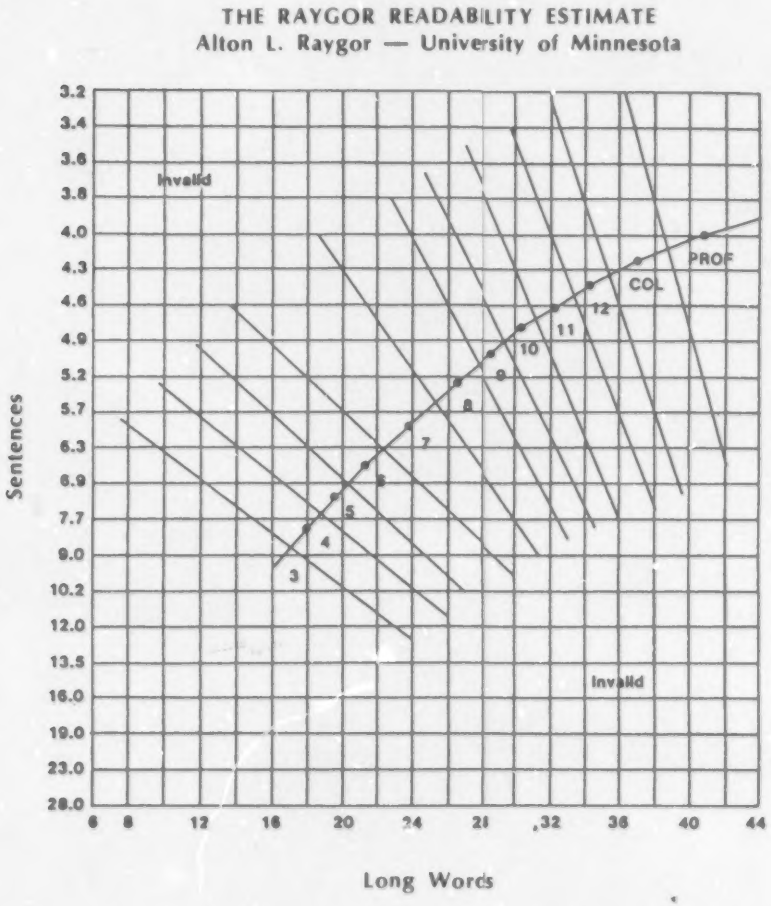
1. Typically they are restricted to characteristics of text that can be "counted," such as word or sentence length. However there are many other characteristics that can make reading easy or difficult.
2. They do not take into account the interest or appeal of the subject matter to the reader. How could they? Reading interest is by nature an individual variable. Instructors consistently report that students can sometimes read material that is two or three "grades" above their apparent capacity if the content is of sufficient appeal and relevance.
3. They do not take into account physical aspects of text such as print size, typeface, legibility, layout, and graphics.
4. They may not reflect the contribution to readability made by such features of style as overviews, summaries, clear organizational patterns, or transitional phrases.
5. A reader may have "college level" reading ability but prefer to read business proposals, technical reports, and leisure reading at simpler levels.

6. Typically, about three or four samples of text are all one has time to analyse. It should be recognized, however, that the more samples are taken, the more reliable will be one's conclusions.

7. Readability measures may distract us from more valid and reliable measures of readability such as putting a real book into the hands of readers and asking **them** about its readability.

EXAMPLE 1: THE RAYGOR READABILITY ESTIMATE[1]

1. Count out three 100-word passages at the beginning, middle, and end of a textbook selection. Count proper nouns but not numbers.
2. Count the number of sentences in each 100-word passage, estimating to the nearest tenth for partial sentences.
3. Count the number of words with more than five letters.
4. Average the sentence length and word length measures over the three samples and plot the average on the graph. The grade level nearest the spot marked is the best estimate of the difficulty of the selection.



EXAMPLE 2:
THE GUNNING-FOG INDEX
(SIMPLIFIED)[2]

1. Select a passage near the beginning of a story or article. Count 100 words. Stop at the end of the sentence after the hundredth word.
2. Count the number of words in each sentence.
3. Find the **average number of words per sentence** by dividing the total number of words by the total number of sentences.
4. Count the number of "hard words." A hard word is a word of **three** or more syllables. Figure the **percentage of hard words** (hard words, divided over total words, times 100).
5. Add: average sentence length plus percentage of hard words.
6. Multiply result by 0.4 (or 4/100). Discard numbers after the decimal point in the final result.
7. The resulting figure is the **approximate** grade level of the material.
8. Repeat the measure for at least two more passages, one around the middle of the story, the third close to the end.
9. The average of the three scores is the approximate readability level. IT IS ESSENTIAL TO TAKE AT LEAST THREE SAMPLES.

References

[1] Raygor, Alton L., "The Raygor Readability Estimate," in J.E. Readence, T.W. Bean, and R. Scott Baldwin, *Content Area Reading: An Integrated Approach* (Dubuque, Iowa: Kendall-Hunt, 1981), p. 60. Reprinted by permission of the publisher.

[2] R. Gunning, *The Technique of Clear Writing* (New York: McGraw-Hill, 1952). Reprinted by permission of Gunning-Mueller.

Resources

Fry, Edward. "Fry's Readability Graph: Clarification, Validity and Extension to Level 17," *Journal of Reading*, 21 (1977), pp. 242-251.

GLOSSARY

Achievement Test: A test designed to measure the knowledge and/or skill a person has acquired.

Battery: A set of tests given at about the same time.

Correction for Guessing: An adjustment to a test score to allow for items that may have been "guessed" correctly.

Correlation: Tendency for two variables (such as scores) to be related to one another. (Correlation does **not** imply causation).

Correlation Coefficient: A number between −1.0 and +1.0 indicating the degree of relationship between two variables. No relationship = 0; perfect relationship = +1.0.

Criterion (plural-criteria): Standard against which something is measured.

Criterion-Referenced Test: A test that measures performance against absolute standards of marking.

Derived Score: The new score converted to another score.

Diagnostic Test: A test that provides for analyses of a person's specific strengths and weaknesses.

Difficulty (Index of): An index that indicates the proportion of students who get a test item right. (Higher number = less difficult).

Discrimination (Index of): A number that indicates the extent to which an item reveals the difference between high scores and low scores.

Domain: The general content area from which test items are drawn.

Form: Alternate, usually equivalent versions of the same test.

Grade Equivalent (Score): A score that expresses the average performance of students in a school grade level. Of limited use for adult education.

I.Q.: A rough estimate of a person's intellectual capacity. Average = 100; Normal = 85-115.

Item: A single problem or question on a test.

Locator Test: A pre-test designed to indicate the most appropriate level of further testing **or** tentative placement in instructional materials.

Mean: The score that divides exactly the "top half" from the "bottom half" (may be above, below, or at the mean).

Normal Distribution: A mathematical curve that plots the way a very large number of scores are distributed between the lowest and highest points.

Norms: A set (usually a table) of values that provides for comparisons of an individual's performance with those of a specified group.

Norm-Referenced Test: A test designed to provide for comparison of a person's performance with those of a specified group.

Percentile: A number from 1-99 that indicates the percentage of scores in the comparison group that fall **below** (or equal to) an individual's score. **Percentile rank** of 38 indicates a score as high or higher than that made by 38% of others in that group. (Percentile is **not** the percentage of correct responses).

Placement Test: A test designed to indicate appropriate instructional level of a student in a program.

Predictor: A test score that enables an estimate to be made about a person's performance in a special area.

Range: The difference between the highest and lowest scores on a test.

Rank: A measure of position of a score within a set of scores (e.g., 1st, 22nd, 49th). See also Percentile.

Raw Score: Basic score on a test, usually number of responses correct. See also Derived Score.

Readability Level: Difficulty level of reading material, usually in terms of equivalent grade level. Estimated by formulas such as Fry, Gunning, or Raygor.

Reading Age: A British measure of reading competence. The age at which an average person in school would be at this performance level.

Reliability: The degree to which a test gives consistent results. Statistically expressed as a **reliability coefficient** (from 0 to 1.0) which correlates scores on different forms, "split-halves," or different administrations of the same test.

Standard Deviation (S.D.): A measure of how far scores are above or below the mean.

Standard Error (S.E.): The amount a statistic may vary because of measurement error or estimation error.

Standardized Test: A test for which **norms, reliability,** and **validity** have been established.

Stanine: A score from 1-9 that relates an individual's score to those on the normal distribution (curve). Stanine 1 is low; 9 high; 5 the mean; 2 the standard deviation.

Sub-scale/Sub-score/Sub-test: A smaller component of a scale, score, or test.

Validity: Degree to which a test measures what it is intended to measure.

Resources

Lyman, Howard B. *Test Scores and What They Mean.* 3rd ed. Englewood Cliffs N.J.: Prentice-Hall, 1978.

Harris, Theodore L., and Richard E. Hodges. *Dictionary of Reading and Related Terms.* Newark, Del.: International Reading Association, 1981.